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A Staff Report prepared by the
Ministry of Treasury, Economics and Intergovernmental Affairs
for the
Commission on Declining School Enrolments in Ontario (CODE)
April 1978

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The Effect Of Demographic Change On Enrolment and Use Of School Facilities To The Year 2001

(Staff Report)

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PREFACE

At the risk of some generalization, it is fair to say that there are hardly any major social and economic development issues where population does not enter into consideration. In turn, many issues are eventually reflected in expenditure patterns. To obtain a better understanding of how demographic trends -- size, composition and distribution -- affect certain aspects of provincial expenditure in Ontario, a study was initiated to identify some of the issues. Because of its importance, education was selected as one of the sectors for study.

In the course of the study, the Commission on Declining School Enrolments in Ontario (CODE), which was set up by the Ontario government in the summer of 1977, approached Central Statistical Services of this Ministry to expand some of the analytical work as support for some of the Commission's studies. This report was prepared mainly in response to the Commission's request.

The study was prepared by Mr. C. Wong, supported by Mr. R. Kogler and Mr. R. Dalal who provided the demographic input and computer programming, respectively.

Social and Economic Data
Central Statistical Services
March 1978

ACKNOWLEDGEMENTS

We would like to recognize the contribution of the following people. Without their assistance, our study would never have reached its present form, and we are deeply grateful for their time, information and cooperation. Of course, responsibility for the analytical work and the findings rests solely with us.

- Dr. R. W. B. Jackson,
  Commissioner of the Commission on Declining School Enrolments in Ontario (CODE).

- Dr. C. Watson and S. Quazi of the Ontario Institute for Studies in Education (OISE) who also served as staff members for CODE.

- Messrs A. O. Rolavs, G. C. Peek, W. Burtnyk, T. Grootenboer, J. C. Rankin, D. Gilroy, B. Tang, P. Hardy, D. Patnaik and Mrs. J. St. Rose-Haynes, all in the Ministry of Education.

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SUMMARY OF FINDINGS

HISTORICAL POPULATION AND ENROLMENT CHANGE

- Since World War II, elementary and secondary school enrolments in Ontario have shown a threefold increase. The bulk of the increase was attributable to demographic change with the remaining portion due to changes in educational policy, social and economic conditions.* However, in the elementary system, the trend began to reverse in 1971 and enrolment began to decline, while secondary school enrolment continued to increase but at a more moderate rate.

- Except in a few locations, the pattern of enrolment change in various parts of the province was fairly similar to the overall trend.

- Of the three demographic components, the effect of births on enrolment was much greater than migration. On average, the number of new births per year in the past was about four to five times that of the number of children gained from interprovincial and international migration.

- In the past few years, in spite of the increase in the number of immigrant children, of kindergarten pupils and of women of childbearing age, the change in fertility rate was so dramatic that it caused a reversal in the elementary school enrolment trend. Because of the age factor, the same effect will be felt in the secondary school in the next few years.

FUTURE ENROLMENT CHANGE

- Fertility is likely to decline in the future because of changes in social attitudes, availability of effective birth control measures, shortening of the females reproductive period and that decreasing fertility is not new and has occurred in other developed countries as well.

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* Between 1951 and 1970, growth in the elementary and in the secondary systems due to demographic change was over 90% and approximately 40%, respectively.

- Decline in fertility rate and in the number of women in the main child-bearing age groups will result in further decrease in the number of new births.

- On the assumption that fertility rate will continue to decline to 1.6 births/ woman, and with 50,000 annual migration (net) to Ontario, elementary enrolment in the province is expected to continue to decline until the early 1980s (by about 8%) before the trend reverses again. However, the rise will be very moderate and the peak which is expected to occur in about 1996 is still below the present enrolment level (by about 4%).

- The bulk of the enrolment increase will take place in about a dozen areas, mainly in central Ontario. Apart from two or three locations, the rest of southwestern, eastern, and northern Ontario is expected to experience continued enrolment declines. For some of the counties, the decline could amount to 30 to 40% between now and the turn of the century.

- A pattern similar to that for elementary school is displayed by the secondary enrolment trend. However, the decline is likely to be more extensive, both in territory and in degree than that in the elementary schools. Enrolment is expected to decline by about 17% between 1976 and 1991 before the trend will reverse. However, the rise will be very moderate and the projected provincial enrolment in 2001 will still be more than 10% below the present level.

UTILIZATION OF SCHOOL FACILITIES

Existing Condition:

- In the past 25 years the Province has spent over three billion dollars in the construction of facilities to provide over two million new "pupil places" and the result is that about 80% of the existing pupil places in Ontario are less than 25 years old.

THE MOST LIKELY POPULATION, ELEMENTARY AND SECONDARY SCHOOL ENROLMENT TRENDS, (PROJECTION IV) ONTARIO, 1981 TO 2001

YEAR	POPULATION IN MILLIONS			PROJECTED ENROLMENT	
	AGES 5-14	AGES 15-19	ALL AGE GROUPS (AGES 0 TO 85 PLUS)	ELEMENTARY	SECONDARY
1976	1.47 M	0.81 M	8.26 M	1.36 M	0.61 M
1981	1.32 M	0.82 M	8.93 M	1.25 M	0.58 M
1986	1.33 M	0.68 M	9.52 M	1.26 M	0.51 M
1991	1.36 M	0.67 M	10.08 M	1.29 M	0.51 M
1996	1.37 M	0.69 M	10.60 M	1.30 M	0.53 M
2001	1.34 M	0.70 M	11.00 M	1.27 M	0.54 M

NOTE: M - Million

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- Over two-fifths of all the elementary schools (public and separate) and a fifth of all the secondary schools in Ontario were operating at 75% or less of their capacity in 1975.*

- The underutilization of school facilities occurred in all parts of the province including the rural areas and the metropolitan complexes.

- All sizes of schools were affected, but the majority were in the medium category.

Future Condition:**

- Except in a few locations, the existing school facilities should be sufficient to accommodate the projected level of enrolment for the balance of the century. About two-thirds of all the elementary and three-quarters of all the secondary schools analyzed would be operating at 75% or less of their capacities in the future.

- The decline in the rate of capacity utilization in the public school is expected to be more extensive than in the separate schools.

- In the elementary and secondary systems, most of the schools with notable higher rates of capacity utilization (i.e. more than 90%) are expected to be concentrated in four main locations, namely, north of the Toronto/Hamilton urban complex (i.e., parts of Dufferin, Simcoe and Victoria), part of the Bruce Peninsula and the areas outside the cities of Windsor and Ottawa.

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* Capacity refers to Effective Capacity, i.e. 90% of the Ministry of Education Rated Capacity.

** The conclusions referred to mainly to all parts of the province except northern Ontario and the Toronto-Hamilton urban complex (i.e., the Regional Municipalities of Durham, York, Metro Toronto, Peel, Halton and Hamilton/Wentowrth).

I. INTRODUCTION

Recent changes in elementary and secondary school enrolment trend have generated considerable public interest in the field of education, particularly in relation to the demand for teachers, provincial expenditure and in the impact on education and the community. This study is largely an attempt to provide an up-to-date perspective on the enrolment situation together with some aspects of its implications on the use of facilities in various parts of Ontario. After a historical analysis of the effect of demographic change on the enrolment trend, the report set out to examine three issues:

- the extent of variations in future enrolment based on different demographic assumptions (e.g., fertility and migration);
- the most likely future direction of enrolment change in various parts of Ontario in the light of the most recent demographic trends;
- the impact of the most likely projected enrolment trend on the utilization of existing school facilities.

II. POPULATION AND ENROLMENT CHANGE: A HISTORICAL PERSPECTIVE

Since World War II, Ontario has experienced substantial changes in school enrolment. In 1946, there were about half a million pupils attending elementary schools (public and separate), and by 1970 the number had grown to one million and a half -- a threefold increase (Figure 1). A similar growth rate was also noted in the secondary school system which saw its enrolment expand from about 120,000 in 1946 to over 610,000 in 1976. However, in the elementary school system, the trend began to reverse in 1971 and enrolment began to decline, while secondary school enrolment continued to increase but at a more moderate rate.*

The declining trend in elementary school enrolment was caused mainly by the public school component. In the separate school system, the level of provincial enrolment has remained fairly constant in the past few years due to some fairly notable increases in the Regional Municipalities of Peel, York and Metro Toronto.

In general, except for a few locations, the pattern of enrolment change in various parts of the province was fairly similar to the overall provincial trend. (Table 1).

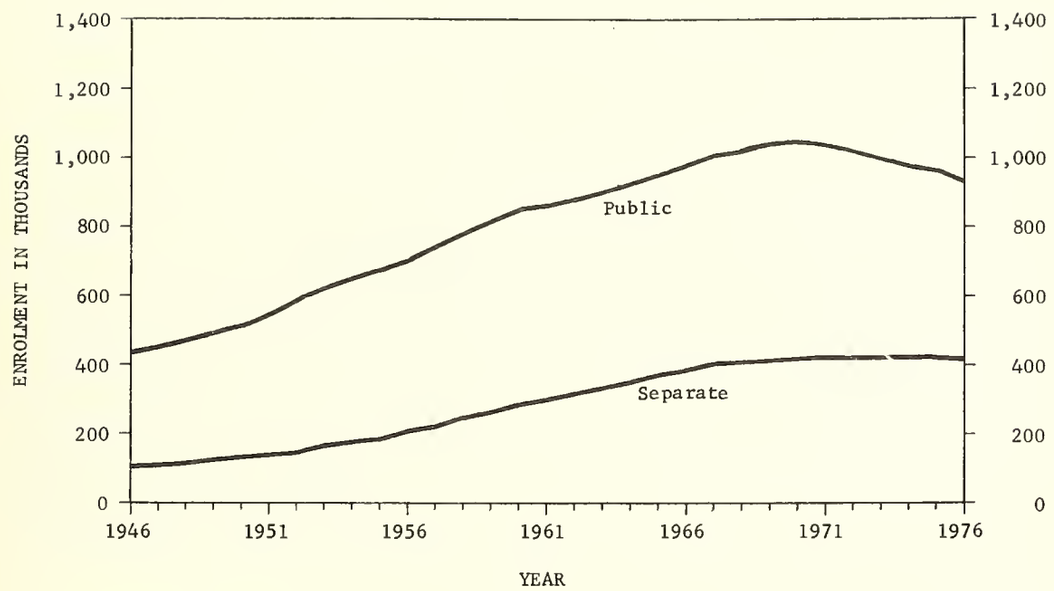
---

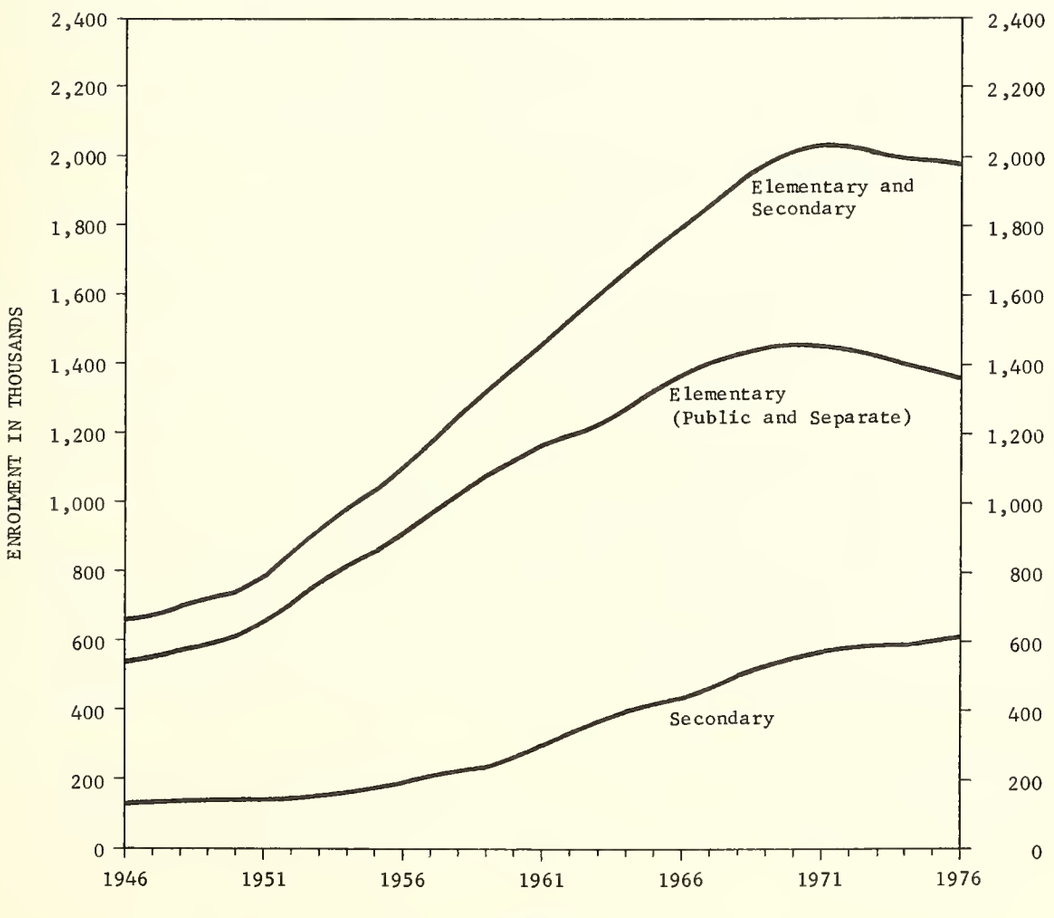
* For a more detailed description of the provincial trend up to 1971, see Interim Report No. 4, Committee on the Costs of Education, 1974.

FIGURE 1

ENROLMENT TRENDS - PUBLIC, SEPARATE AND SECONDARY,

ONTARIO 1946 - 1976





SOURCE: Compiled by Social and Economic Data, Central Statistical Services, Ministry of Treasury, Economics and Intergovernmental Affairs, based on data from Education Statistics, Ministry of Education and Statistics Canada, 1978

TABLE 1

CHANGE IN COUNTY ENROLMENT, ELEMENTARY AND SECONDARY SCHOOLS
1966 TO 1971 AND 1971 TO 1976

COUNTY	ELEMENTARY		SECONDARY	
	1966-1971	1971-1976	1966-1971	1971-1976
CENTRAL ONTARIO REGION				
Brant	+	-	+	-
Dufferin	+	+	+	+
Durham (R.M.)	+	-	+	+
Haldimand/Norfolk	+	-	+	-
Haliburton	+	-	+	+
Halton	+	-	+	+
Muskoka (R.M.)	+	-	+	+
Niagara (R.M.)	+	-	+	-
Northumberland*	+	-	+	+
Peel (R.M.)	+	+	+	+
Peterborough*	0	-	+	0
Simcoe*	+	0	+	+
Victoria*	+	+	+	+
Waterloo (R.M.)	+	+	+	+
Wellington	+	-	+	+
Hamilton/Wentworth (R.M.)	+	-	+	-
Metro Toronto	+	-	+	+
York (R.M.)	+	+	+	+
SOUTHWESTERN ONTARIO REGION				
Bruce	+	+	+	+
Elgin	+	-	+	+
Essex	+	-	+	-
Grey	+	-	+	+
Huron	+	-	+	+
Kent	+	-	+	-
Lambton	-	-	+	-
Middlesex	+	-	+	+
Oxford	+	-	+	+
Perth	+	-	+	+
EASTERN ONTARIO REGION				
Dundas/Glengarry/Stormont	-	-	+	+
Frontenac	+	-	+	+
Leeds/Grenville	+	-	+	+
Hastings	+	-	+	+
Lanark	+	-	+	+
Lennox/Addington	+	+	+	+
Ottawa/Carleton	+	-	+	+
Prescott/Russell	-	-	+	+
Prince Edward	+	-	+	+
Renfrew	-	-	+	-
NORTHEASTERN ONTARIO REGION				
Algoma	+	-	+	+
Cochrane	-	-	+	+
Manitoulin	+	-	+	+
Nipissing	+	-	+	+
Parry Sound	+	-	+	+
Sudbury (Dist. + R.M.)	+	-	+	+
Timiskaming	-	-	+	-
NORTHWESTERN ONTARIO REGION				
Kenora	-	-	+	+
Rainy River	-	-	+	-
Thunder Bay	-	-	+	-
ONTARIO	+	-	+	+

*1976 Boundary

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Central Statistical Services
Ministry of Treasury, Economics
and Intergovernmental Affairs, 1978

In the elementary school system, the two areas which did not display an increase in enrolment during 1966-1971 were the northwestern and the extreme eastern parts of the province.* After 1971, while most parts of the province experienced a declining trend, the only major area which showed a marked enrolment increase were those in the north and northwestern parts of Metropolitan Toronto (e.g., Peel, York and Dufferin) and Waterloo. Some increase was also found in the counties of Bruce and Lennox/Addington, a result of the impact of the hydro development projects in these areas.

In the secondary school system, every county showed an enrolment increase before 1971. The only significant development which has taken place since 1971 was that of the dozen or so areas which showed an enrolment loss, many of them were highly urbanized counties and containing some of the largest centres in the province (e.g., Hamilton, Windsor, and Sarnia).

Among the various counties in Ontario, the most spectacular change occurred in Peel followed by Dufferin. In the former, enrolment increase in the elementary schools was almost twice as large as the provincial average, while

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* Ottawa - Carleton was excluded.

in the secondary schools it was more than three times larger over the past 10 years (Appendices 1 to 4).

The enrolment trend which Ontario experienced was a result of a number of contributing factors, including changes in the demographic structure, in social and economic conditions, and in educational policy.* In the elementary school system, extension of a number of programs (e.g., kindergarten and special education classes), has been responsible for some increase in enrolment. In regard to the secondary school system, there were two aspects of the economy which had had important implications for enrolment.

- Rapid economic expansion in the province especially during the 1960s.
- Increasing technological complexity in the economy.

The result has been a growing demand for a large but also better educated and trained labour force. School authorities responded to this need by an extension of the then predominantly academic program to include courses in business, technology and trades, as well as by making the facilities more accessible through improvements in pupil

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* An amendment was made to The School Administration Act which changed the compulsory school attendance age from 8-14 to 6-16 in 1954.

transportation systems.* These factors, reinforced by a change in social attitudes towards higher education and the provision of expanded facilities were the main causes for the increase in participation in the secondary school system during the 1950s and 1960s. As a result, the proportion of the population aged 15-19 enrolled in secondary schools in the province doubled, from abour 40% in 1950 to 80% in the 1970s (Figure 2). In the past few years, the trend appears to have been levelling off after a slight decline in 1971 and 1972.

Among the various factors, however, it was the demographic characteristics which exerted the most influence on the pattern of enrolment in the province. The three major demographic forces at work were:

- The number of births, which is a function of the number of women in the child-bearing group (ages 15-49) and their respective birth rates.**
- The number of children gained or lost through population exchange with other provinces.
- The number of child immigrants from other countries.***

---

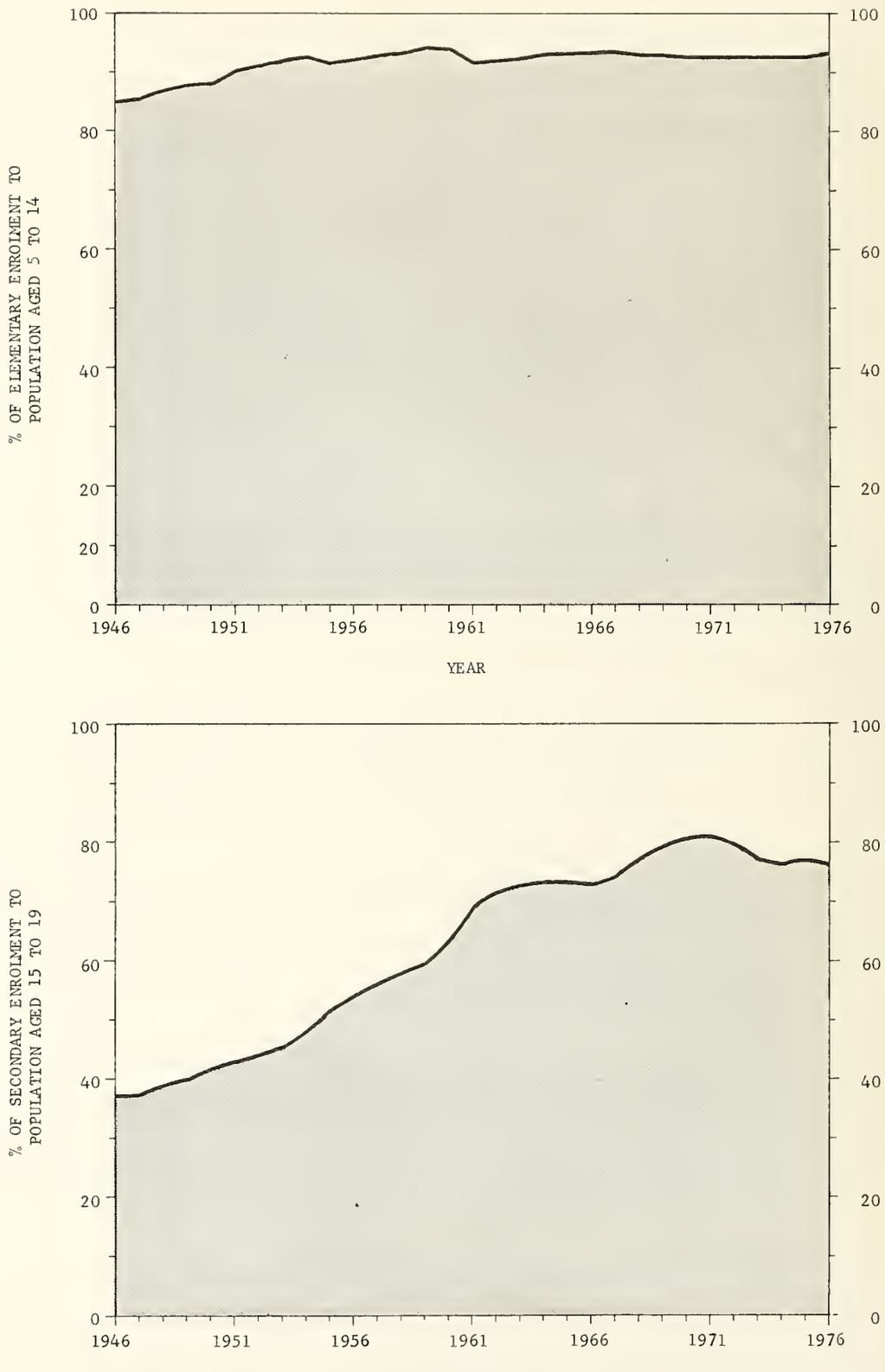
* The major expansion of the vocational training program began in 1961. At that time, the proportion of students enrolled in special vocational training was about 2% of total secondary enrolment. By 1970, the proportion had risen to about 6%.

** The highest birth rates occur in the 20-29 age groups.

*** Only the gross number of immigrant children is available. However, it is estimated that the proportion of immigration to emigration for Canada is about three to one. Thus, it can be expected there has been a net gain of immigrant children in Ontario in the past.

FIGURE 2

RATIO OF ELEMENTARY AND SECONDARY ENROLMENT TO SCHOOL AGE POPULATION, ONTARIO, 1946-1976



SOURCE: Compiled by Social and Economic Data, Central Statistical Services, Ministry of Treasury, Economics and Intergovernmental Affairs, based on data from the Education Statistics, Ministry of Education and Statistics Canada, 1978

The historical trend of these three demographic factors is depicted in Figures 3 through 7. A number of observations can be made about their major characteristics.

- Apart from a slight increase in recent years, no definitive trend in the number of immigrant children can be noted.

- Similarly, in interprovincial migration no consistent trend can be detected. However, in the past few years, Ontario suffered fairly noticeable losses to other provinces.

- While the number of women in the child-bearing age group continued to increase, the effect of declining birth rates which began in 1961 was so substantial that it caused a decline in the number of births. From a peak of about 160,000 births in 1960, the number dropped to slightly over 120,000 in 1976 -- a decline of about 23%. During the same period, the number of women in the 15-49 age group increased by over 50%.*

- There was a slight downward trend in infant mortality. However, compared with births, the effect of infant deaths on school population is minor. For example, in 1970 the proportion of infant deaths to live births was less than 2%.

- Comparing the three demographic components, the effect of births on enrolment was much greater than migration. Throughout the 1960s and until the present, the magnitude of the number of new births per year was about four to five times that of the number of children gained from interprovincial and international migration.**

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* The growth in the major child-bearing age group (ages 20-29) was even more dramatic, over 80%.

** The slight increase in the number of births between 1968 and 1970 was due to a slowdown in the decline in fertility during the period, coupled with a sharp influx of immigrants, including child-bearing age women, a few years earlier (1966 to 1968)

FIGURE 3

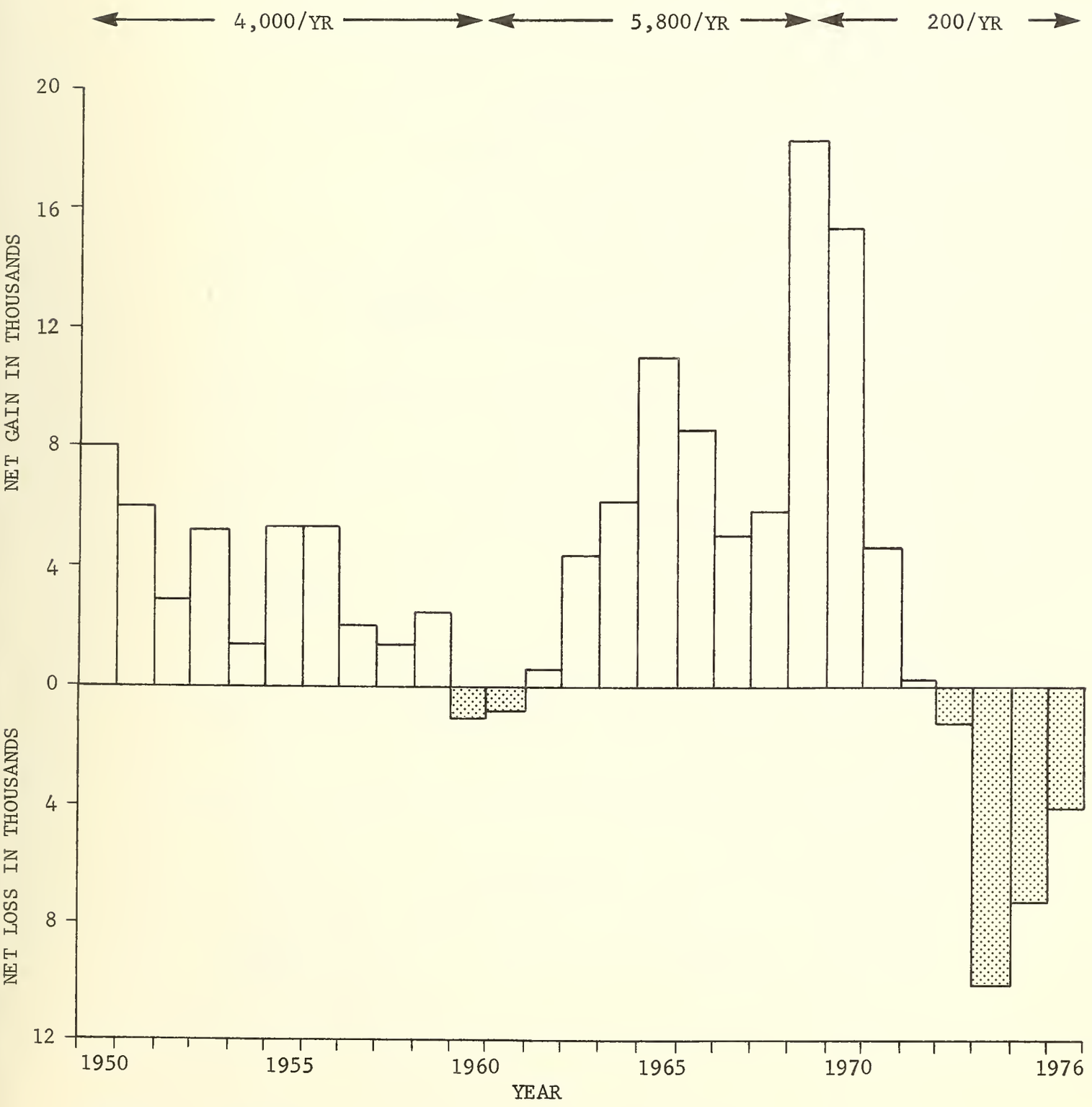
IMMIGRANTS TO ONTARIO, 1950 TO 1976
UNDER 18 YEARS OF AGE AND ALL AGES

NOTE: Data based on intended destination of immigrants

SOURCE: Prepared by Social and Economic Data, Central Statistical Services, Ministry of Treasury, Economics and Intergovernmental Affairs, based on data from the Department of Manpower and Immigration, 1977

FIGURE 4

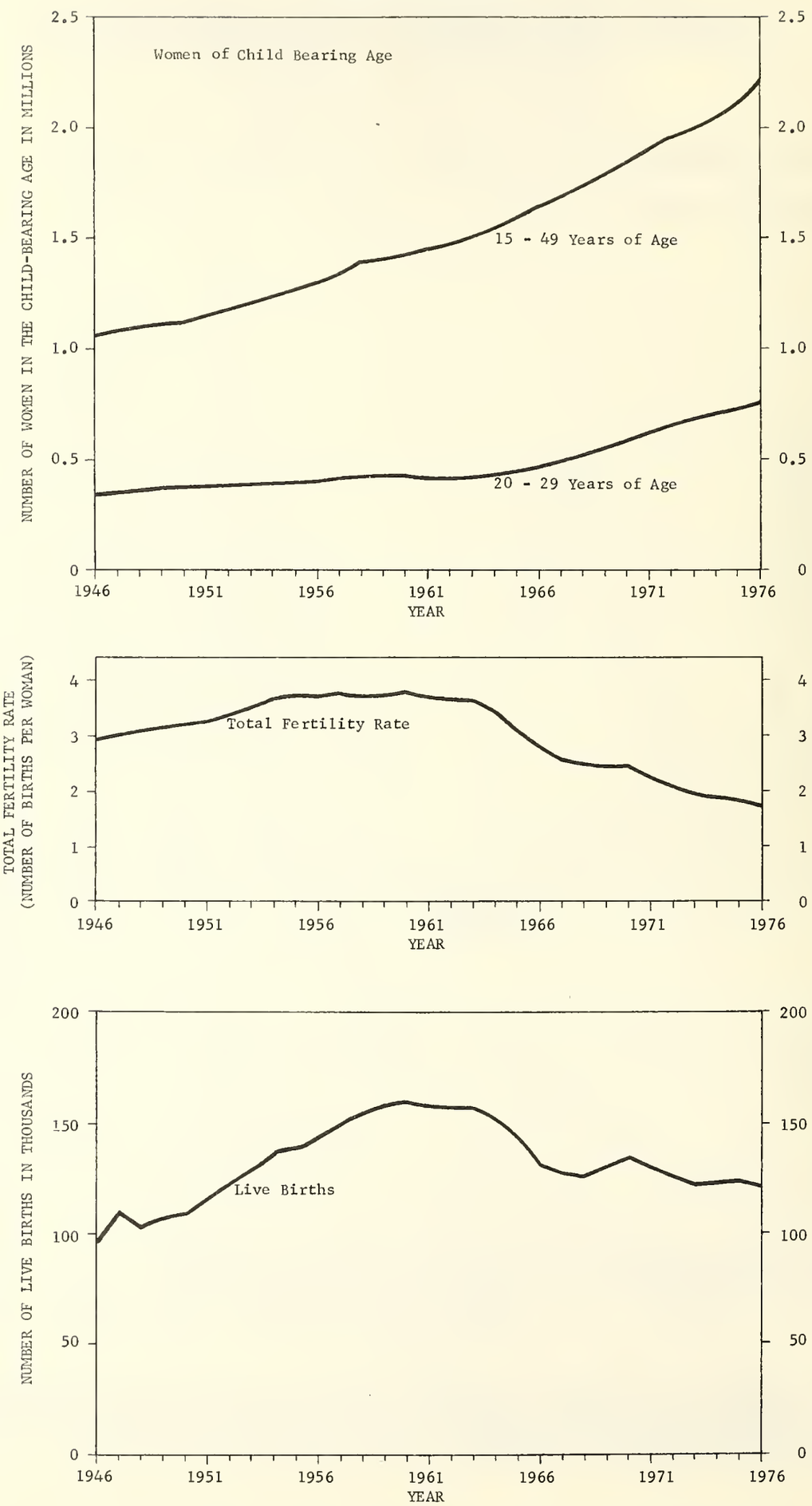
NET NUMBER OF CHILDREN (AGE 15 AND UNDER) GAINED OR LOST TO ONTARIO IN MIGRATION EXCHANGE WITH OTHER PROVINCES, 1950 TO 1976



SOURCE: Prepared by Social and Economic Data, Central Statistical Services, Ministry of Treasury, Economics and Intergovernmental Affairs, based on Family Allowance Records.

FIGURE 5

NUMBER OF WOMEN OF CHILD-BEARING AGE
FERTILITY RATE AND THE NUMBER OF LIVE BIRTHS,
ONTARIO, 1946 - 1976



SOURCE: Prepared by Social and Economic Data, Central Statistical Services, Ministry of Treasury, Economics and Intergovernmental Affairs, based on data from Education Statistics, Ministry of Education and Vital Statistics, 1977

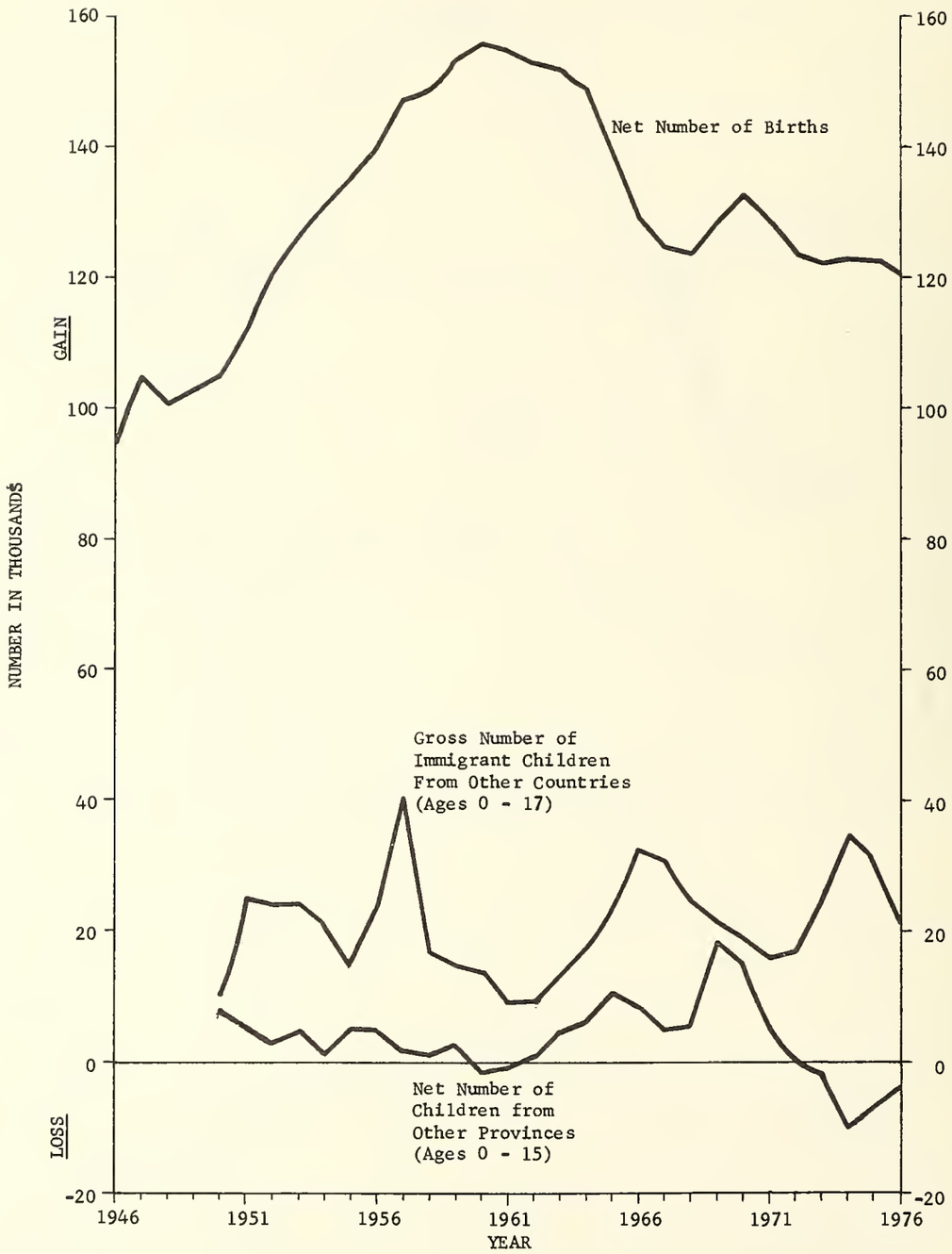
FIGURE 6

NUMBER OF LIVE BIRTHS AND INFANT DEATHS, ONTARIO, 1946-1976

SOURCE: Prepared by Social and Economic Data, Central Statistical Services, Ministry of Treasury, Economics and Intergovernmental Affairs based on data from Vital Statistics, 1977

FIGURE 7

COMPARISON OF THE NUMBER OF NET BIRTHS, IMMIGRANT CHILDREN AND CHILDREN GAINED OR LOST FROM OTHER PROVINCES, ONTARIO, 1950 TO 1976



NOTE: Net Births = Live Births minus Infant Deaths

SOURCE: Prepared by Social and Economic Data, Central Statistical Services, Ministry of Treasury, Economics and Intergovernmental Affairs

The cumulative effect of these three demographic forces on enrolment was substantial. In the 1950s and 1960s, over 90% of the growth in elementary enrolment and about 40% of the growth in secondary enrolment were mainly attributable to demographic changes (Table 2). The effect was equally remarkable as one approached the 1970s. In spite of an increase in the number of immigrant children, of kindergarten pupils and of women of child-bearing age, the change in the fertility rate was so dramatic that it caused a reversal in the elementary school enrolment trend. Because of the age factor the same effect will be felt in the secondary school system in the next few years. These demographic forces, together with recent changes in the national economy and in a number of government policies (e.g., immigration), all have a profound impact on enrolment in both the short and long terms.

Like the babies born during the 1950s and 1960s, the children born in the early 1970s will produce a ripple effect as they begin to enter the elementary school system in the mid 1970s, and the secondary school in the early 1980s and become potential parents in the early 1990s. To what extent will the future pattern mirror the past? In the next section, we shall attempt to examine this question by translating the demographic changes into enrolment terms.

TABLE 2

ESTIMATE OF THE EFFECT OF DEMOGRAPHIC CHANGE ON ELEMENTARY AND SECONDARY SCHOOL ENROLMENT, ONTARIO, 1951 TO 1970

ELEMENTARY

COMPONENTS OF ENROLMENT GROWTH	NUMBER	PER CENT OF TOTAL
Due to extension of kindergarten and special education programs	55,200	7
Due to demographic change	755,800	93
Total enrolment growth	811,000	100

SECONDARY

COMPONENTS OF ENROLMENT GROWTH	NUMBER	PER CENT OF TOTAL
Due to increase in participation rate	264,000	62
Due to demographic changes	159,400	38
Total enrolment growth	423,400	100

NOTE: In elementary school the effect of kindergarten and special education was calculated by obtaining the difference between the actual change and the change which would have taken place if the per cent enrolment in kindergarten and special education to total elementary enrolment remained the same in the period considered. In 1950 the actual per cent of kindergarten and special education to total elementary enrolment was about 9 per cent and in 1970, it was slightly over 13 per cent.

Similiar reasoning was applied in the secondary enrolment calculation. Here the effect of the participation rate was obtained by comparing the actual enrolment change and the change which would have taken place if the 1950 enrolment/population rate was carried to 1970. The result is consistent with another indicator. Between 1951 and 1970, population change in the 15-19 age group increased by about 220 per cent while secondary enrolment grew by about 420 per cent, a proportion of about half.

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Central Statistical Services
Ministry of Treasury, Economics
and Intergovernmental Affairs, 1978

III. DIRECTION OF FUTURE ENROLMENT CHANGE

A) Purpose of the Projections and Choice of Technique

The purpose of the projection is not to obtain finite enrolment figures by individual grade or age groups for detailed education planning. Rather it is intended:

- To identify the extent of variations in future enrolment based on different demographic assumptions (e.g. fertility and migration);
- To obtain a perspective on the most likely direction of enrolment change in various parts of the province to the turn of the century based on the most current demographic trends.

Together, these two sets of information will provide a framework not only for identifying various issues, but also for assessing options in a number of areas (e.g., expenditure, manpower) resulting from changes in population.

At present, three sets of enrolment projections are available. As can be seen from Table 3, in both the Statistics Canada and the Ontario Ministry of Education series, information is available only at the provincial level. In the case of the Ontario Institute for Studies in Education (OISE) estimate, while information is available at the county level, the projection only goes to 1984. Furthermore, in all three projections, the fertility and

TABLE 3

DESCRIPTIONS OF ENROLMENT PROJECTIONS FOR ONTARIO PREPARED BY VARIOUS AGENCIES

PROJECTION	PREPARATION DATE	PROJECTION TARGET DATE	GEOGRAPHICAL UNITS	TECHNIQUE EMPLOYED	FERTILITY AND MIGRATION ASSUMPTIONS
Statistics* Canada	1976	To 2001	Province	Not explicitly stated	Total fertility will decline from about 2.19 births/woman in 1971 to 1.78 births/woman in 1979 and the value will then be held constant for the rest of the projection period Net migration (international and interprovincial) = 52,300/year
Ontario Ministry of Education	1977	To 1986	Province	Grade survival method	Not explicitly stated
Ontario Institute Studies in Education (OISE)	1977	To 1986 for province and to 1984 for sub-provincial level	Province, County	Grade survival and age cohort survival methods	Not explicitly stated

NOTE: For a description of various methods, see Watson, C., and Quazi, S., School Planning Manual, OISE, 1973 and Watson, C., "Projection Notes, "Journal of the International Society of Educational Planners, Volume 2, May 1975.

*Zsigmond, Z., Picot, G., Devereaux, M.S., and Clark, W., Future Trends in Enrolment and Manpower Supply in Ontario, Statistics Canada, 1976.

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Central Statistical Services
Ministry of Treasury, Economics
and Intergovernmental Affairs, 1978

and migration assumptions were never really explicitly stated. In the Ministry of Education and the OISE series, the assumptions were implicit in the projection technique used. Because we wanted to examine the impact of various levels of population on enrolment, a projection was made using the enrolment/population ratio technique. The choice of this technique was based on a number of considerations related mainly to the purpose of the study.*

B) Input Assumptions

The projection technique first involved an estimate of the likely enrolment/population relationships by age group. These relationships, generally expressed as ratios, were then applied to the projected population to obtain a projection of enrolment.**

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* First, the technique provides a simple, quick and relatively cheap means for calculating the total enrolment in a specified sector of the school system (e.g., elementary or secondary). As mentioned earlier, we are not really concerned with detailed enrolment projections by specific grade. Secondly a substantial amount of the input data is already available (e.g., population). Thirdly, the enrolment results can be related explicitly to the fertility and migration input and thus enable us to test alternative sets of demographic assumptions.

** For a more detailed description of the techniques, see Watson, C., and Quazi, S., School Planning Manual, Ontario Institute for Studies in Education, 1972.

After examining the historical enrolment/population trends, it was decided that the 1975/76 ratios would be used as input to the projection. In the case of elementary schools, such an assumption is not unreasonable for the following reasons:

- Compulsory school attendance for population ages 6 to 16.
- The enrolment/population ratios by age groups have remained fairly constant during the past few years (Table 4).
- Although there might be some further extension in kindergarten, increase in the participation rate might be limited. In 1976, about 50% of the four year olds and 98% of the five year olds were already in the school system.

For secondary schools, the assumptions may require some qualification. Since attendance beyond age 16 is voluntary, enrolment in the more senior grades is not compulsory. While the participation rates appear to have levelled off in the past few years, it might start to decline somewhat due to changes in the economy and in social attitudes to education and employment. Attempts to quantify future changes in participation rates would require a fairly exhaustive research study and are beyond the present availability of time and resources. However, there is not likely to be any change in participation rates of a very substantial nature unless there are drastic changes in education policy. Measurement of any changes of that kind

TABLE 4

RATIO OF ENROLMENT TO POPULATION BY AGE GROUPS, 1971 TO 1976

ELEMENTARY SCHOOL

YEAR	PER CENT OF ENROLMENT/POPULATION BY AGE GROUPS					
	3	4	5	6 TO 13	14 TO 17	3 TO 17
1971	18.9		90.5	94.5	9.8	63.7
1972	5.4	44.9	92.4	95.0	8.9	64.1
1973	6.3	48.2	96.9	93.9	8.7	63.2
1974	7.0	49.6	98.4	93.8	8.8	62.5
1975	7.1	51.4	97.3	94.0	8.8	62.0
1976	7.4	49.1	97.7	95.0	8.6	61.9

SECONDARY SCHOOL

YEAR	PER CENT OF ENROLMENT/POPULATION BY AGE GROUPS			
	11 TO 12	13 TO 18	19 TO 22	11 TO 22
1971	0.5	62.1	3.6	32.6
1972	0.5	62.3	3.1	32.5
1973	0.5	61.3	2.5	32.3
1974	0.4	60.5	2.3	31.6
1975	0.4	60.9	2.4	31.8
1976	0.4	61.4	2.4	32.1

SOURCE: Prepared by Social and Economic Data, Central Statistical Services, Ministry of Treasury, Economics and Intergovernmental Affairs, based on Education Statistics, Ministry of Education, 1978

would require specific simulations. Furthermore, the general effects of the enrolment participation factor will be discussed in the evaluation of the projection results.

The population input was derived from the projections prepared by the Ministry of Treasury, Economics and Intergovernmental Affairs. Five sets of population projections were established based on variations in fertility and migration assumptions.

Projection No.	ASSUMPTIONS		Population in Millions
	Net Migration to Ontario per year*	Total Fertility**	
Series "A" I***	50,000	Decline from 2.2 in 1971 to 2.0 in 2001	11.6 M
II	50,000	Decline from 2.2 in 1971 to 1.7 in 2001	11.2 M
III	25,000	"	10.3 M
Series "B" IV****	50,000	Decline from 1.8 in 1975 to 1.6 in 2001	11.0 M
V	25,000	"	10.1 M

* Net Migration represents net movement from other provinces and from other countries.

** Measured by the number of births per woman during her life time. For further details on the fertility assumptions, see Appendix 6.

*** This is the projection which was contained in the Ontario Changing Population, Vol. II, Ministry of Treasury, Economics and Intergovernmental Affairs, 1976.

**** This is regarded as the most likely trend at present; see discussion in subsequent section.

Series "A" projections were prepared in 1972 while Series "B" projections were prepared in 1975. However, in all of the projections, appropriate adjustments have been made to account for the recent changes in fertility and for the shift in the geographical distributions of population between 1971-1976.*

C) Alternative Projections

A total of five sets of enrolment projections were generated based on the fertility and migration assumptions discussed in the last section. The results of the provincial trends are shown in Figures 8 and 9.**

Elementary:

- All five projections show a declining trend up to the early part of the 1980s. Between 1976 and 1981, it is expected that enrolment will decline about 8% (from about 1.36 million in 1976 to about 1.25 million in 1986) under the 50,000 net migration assumption (i.e. Projections I, II and IV) and by 13% under the 25,000 net migration assumption (from about 1.36 million to 1.20 million).***

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* See Appendix 5 for further adjustment details.

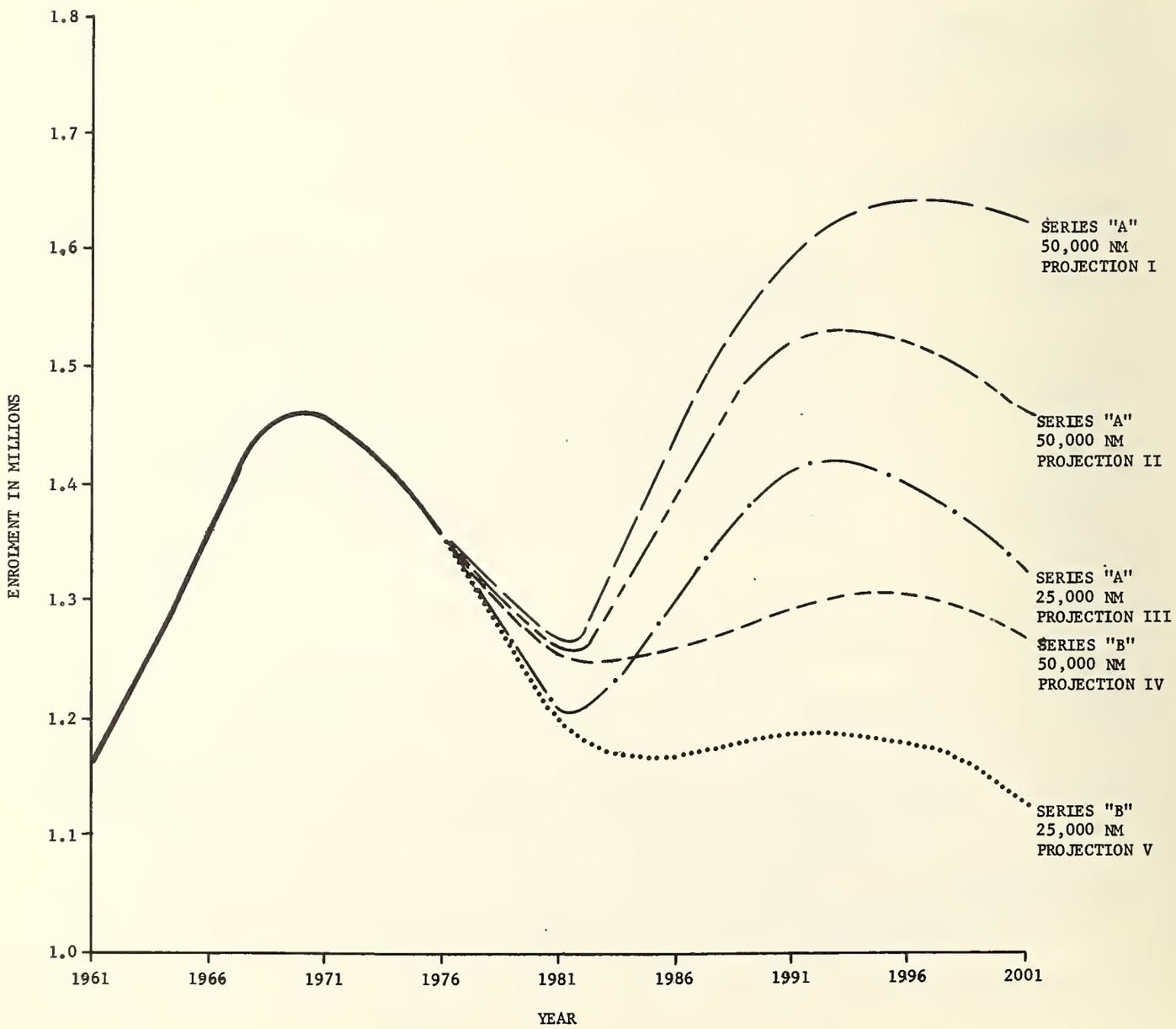
** The enrolment figures discussed here (Figures 8 and 9) were obtained by summing up all the county projections. In addition, a separate projection for the province as a whole was carried out.

*** The projection results did not include enrolments in Indian Reserves and Federal schools.

FIGURE 8

ENROLMENT TRENDS, ELEMENTARY SCHOOLS

ONTARIO, 1961 TO 2001



NOTE: NM - Net Migration Per Year

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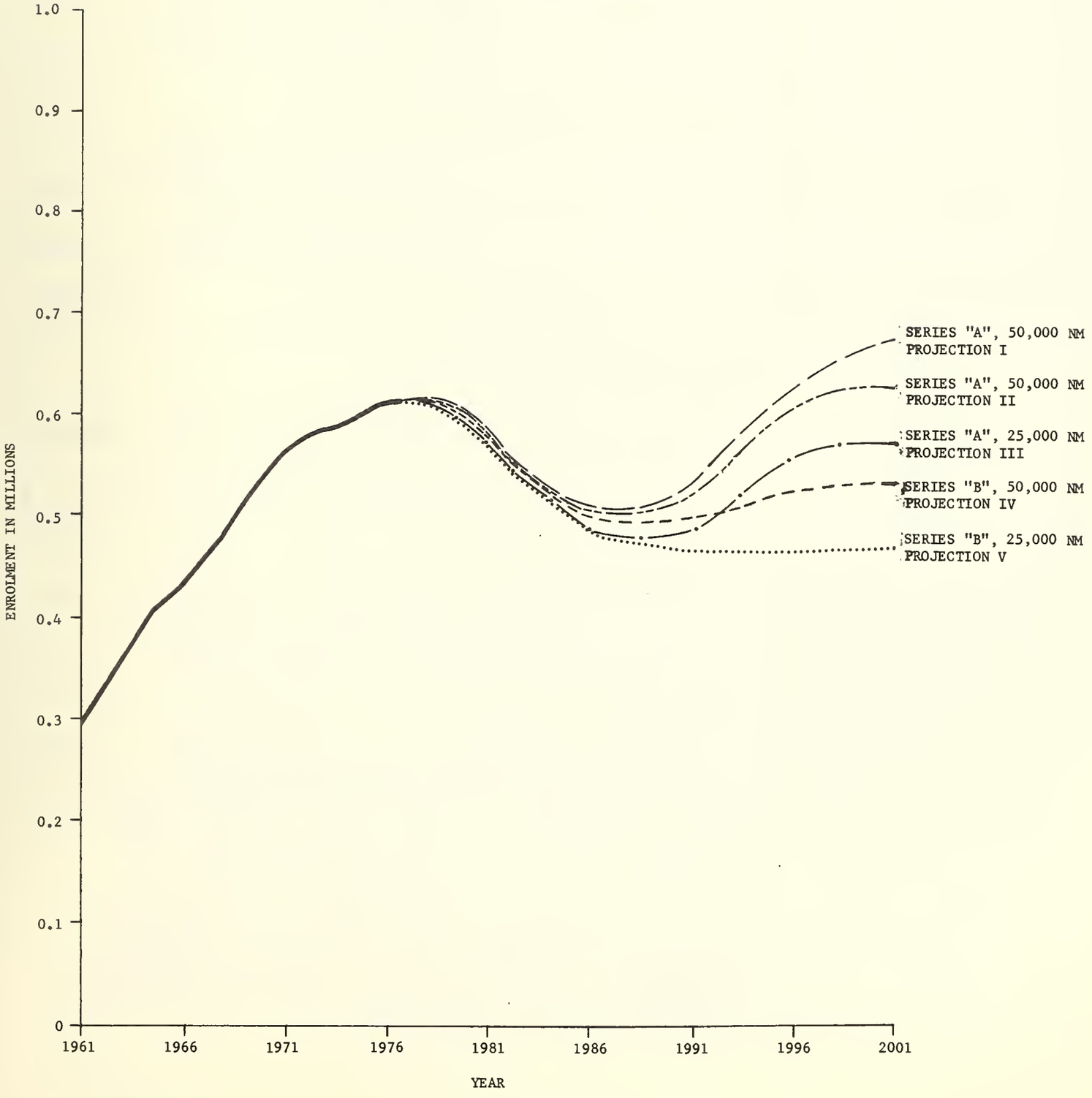
FIGURE 9

ENROLMENT TRENDS, SECONDARY SCHOOLS
ONTARIO, 1961 TO 2001



NOTE: NM - Net Migration Per Year

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Ministry of Treasury, Economics
and Intergovernmental Affairs, 1978

- Beyond the early 1980s, substantial differences were found among the various projections. While all five projections show a rising trend in enrolment up to the mid 1990s, and then a falling off again, the variations in the amount of increase were remarkable. Under the Series "A" assumptions, all the projections rose beyond the 1976 level, and under the Series "B" assumptions the rise would be very small with the maximum level (occurring in the early 1990s) still below the 1976 level. Furthermore, during the peak enrolment period, the difference between some of the projections (e.g., Projection I vis-a-vis IV) was as much as a third of a million, a very substantial amount.

- The major demographic factor in enrolment trends is the fertility rate. For example, Projection IV with a 50,000 net migration factor was 100,000 less than Projection III with half the migration, 25,000, because the fertility trends in IV were more sharply downward.

Secondary:

Secondary school enrolment exhibited a very similar pattern to that of elementary enrolment except in the following two aspects:

- Because of the time lag between elementary and secondary school enrolment, the latter will not reach the bottom of the trough until the early part of the 1990s, when the trend will start to pick up again.

- The size of the decline in the secondary school system is likely to be more severe than in the elementary school system -- about 17% versus 8% (Table 5). At the same time, the degree of rise which is expected to reach a peak towards the end of the century could be less than that in the elementary system. For example, of the five sets of projections, only the peak value of Projection I (which has the highest fertility assumption, and is therefore not too probable), would exceed the 1976 level.

TABLE 5

RATIO (%) OF THE PROJECTED ALTERNATIVE ENROLMENT TO THE 1976 LEVEL
ELEMENTARY AND SECONDARY, ONTARIO, 1981 TO 2001

ELEMENTARY

YEAR	SERIES "A"			SERIES "B"	
	PROJECTION I	PROJECTION II	PROJECTION III	PROJECTION IV	PROJECTION V
1976 BASE	100	100	100	100	100
1981	92	92	88	92	89
1986	104	102	95	93	87
1991	118	112	104	95	87
1996	122	112	103	96	87
2001	121	108	97	94	83

SECONDARY

YEAR	SERIES "A"			SERIES "B"	
	PROJECTION I	PROJECTION II	PROJECTION III	PROJECTION IV	PROJECTION V
1976 BASE	100	100	100	100	100
1981	95	95	93	95	93
1986	83	83	79	84	80
1991	88	87	82	84	78
1996	105	101	93	86	79
2001	111	104	95	87	79

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D) The Most Probable Direction

What is the most likely direction of enrolment change in Ontario among the five sets of projections examined in the previous section? To a large measure, the key factor in answering this question lies in the fertility and migration assumptions that were used in the projection and how applicable they are in the light of current demographic trends.

- Fertility

  At this point in time, it is felt that the fertility assumptions used in the Series "A" projections are too high. The present fertility rate has already dropped below 1.8 births/woman, a figure lower than the values used in the Series "A" projection during the comparable time period. Indications are that this declining trend may continue.*

- Migration

  Net migration (international and interprovincial) to Ontario has averaged slightly under 50,000 per year in the past few years. Further the immigration target for Canada cited in the recent federal government immigration bill was about 100,000 per year. Taking into consideration the emigration flow and the historical interprovincial migration pattern, it appears that a net migration level to Ontario of between 40,000 to 50,000 per year would seem fairly reasonable.**

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* The supporting argument for this observation will be discussed in the conclusion.

** This is assuming that there are no major developments that will drastically alter the historical balance between Ontario and other provinces.

Against the above considerations, among the five sets of projections, it appears that Projection IV represents the most likely enrolment trend in the future.

Under this projection (IV), the total fertility rate is expected to decline from about 1.8 births/woman in 1975 to about 1.6 births/woman in 1986 and remain constant at that level to the turn of the century. Net migration would be maintained at 50,000 per year. Elementary enrolment is expected to decline from 1.36 million in 1976 to a low of 1.25 million by 1981 (a drop of about 110,000) and then rise slowly to a maximum of about 1.30 million (an increase of about 50,000) in the early 1990s before falling off again.*

Similarly, secondary school enrolment will decrease from about 0.61 million in 1976 to about 0.51 million around 1991 before the trend picks up again. By 2001 secondary enrolment will be around 0.54 million (an increase of about 30,000 between 1991 and 2001).

Turning to the enrolment trends in various parts of the province, a number of observations could be made (Figures 10 and 11).

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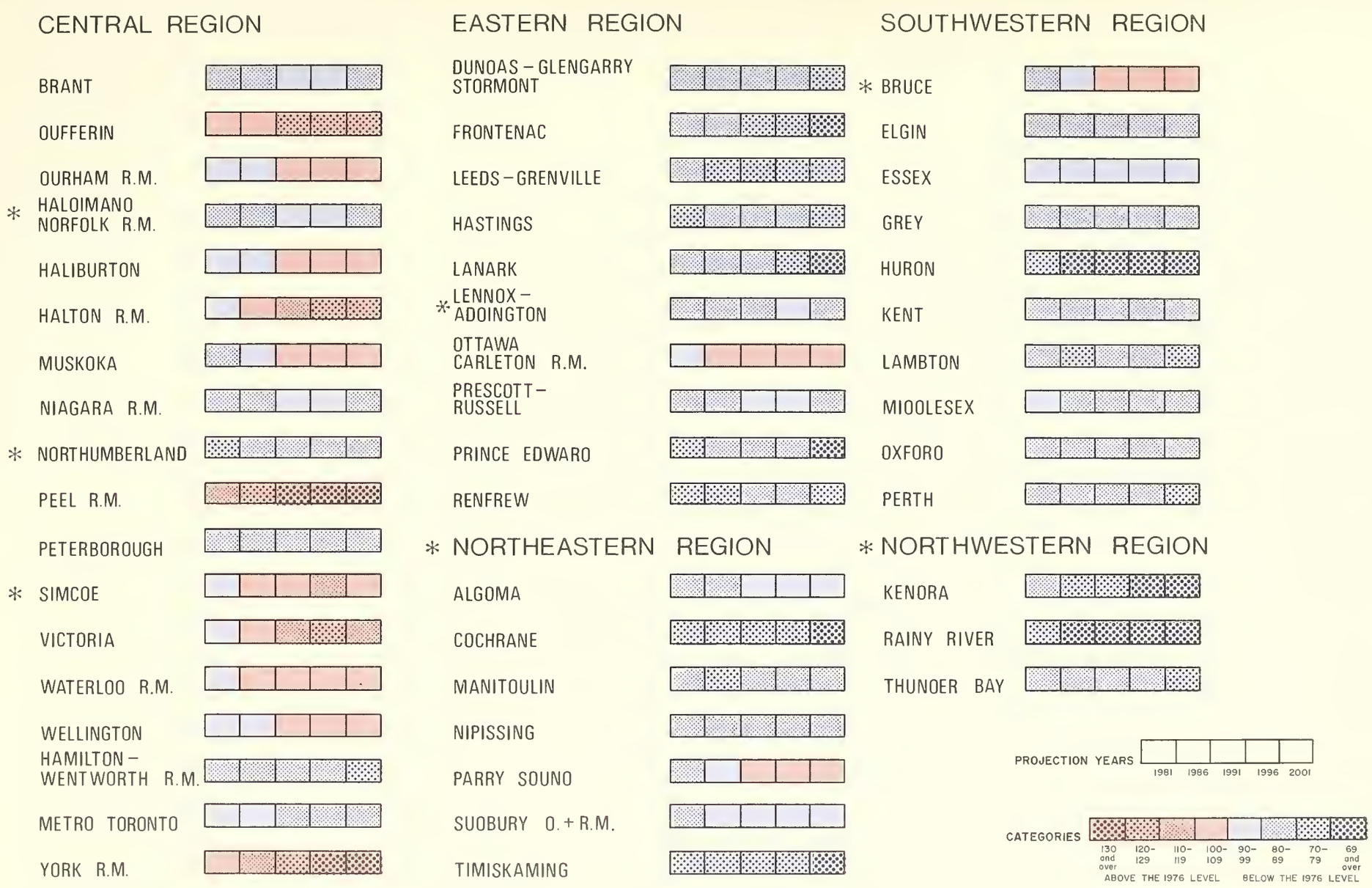
* For details, see table in the Summary of Findings Section (page 4).

PROJECTED COUNTY ENROLMENT AS A % OF THE 1976 LEVEL, ELEMENTARY SCHOOL, 1981 TO 2001, PROJECTION IV (50,000 NET MIGRATION, SERIES B FERTILITY ASSUMPTION)



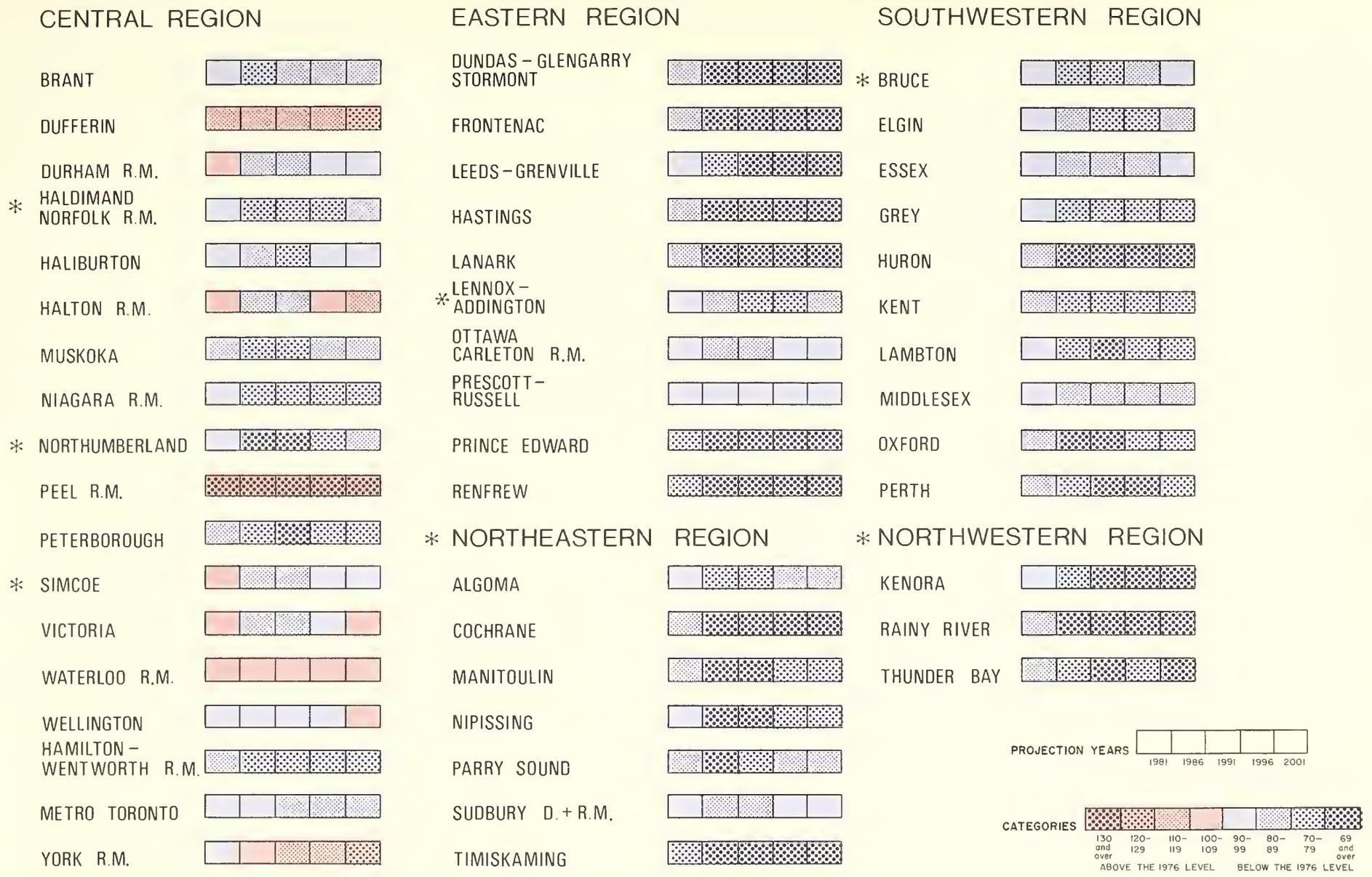
SOURCE: SOCIAL AND ECONOMIC DATA. CENTRAL STATISTICAL SERVICES. MINISTRY OF TREASURY, ECONOMICS, AND INTERGOVERNMENTAL AFFAIRS. 1977

Note. Impact of Development Projects were not included.

* Areas with proposed and/or Committed Development Projects

Figure 10

PROJECTED COUNTY ENROLMENT AS A % OF THE 1976 LEVEL, SECONDARY SCHOOL, 1981 TO 2001, PROJECTION IV (50,000 NET MIGRATION, SERIES B FERTILITY ASSUMPTION)



SOURCE: SOCIAL AND ECONOMIC DATA. CENTRAL STATISTICAL SERVICES. MINISTRY OF TREASURY, ECONOMICS, AND INTERGOVERNMENTAL AFFAIRS. 1977
Note: Impact of Development Projects were not included.
* Areas with proposed and/or Committed Development Projects

Figure 11

Elementary:

- Almost all the counties and districts in Ontario will experience a decline in enrolment between 1976-1981.* Although some areas will be affected marginally, the impact in a number of areas (e.g., Huron, Cochrane, Renfrew), will be substantial.**

- After 1981, while the provincial trend will reverse itself, the bulk of the enrolment increase will take place in about a dozen areas mainly in central Ontario. In fact, if the increases for Dufferin County and the Regional Municipalities of Peel, York and Halton were excluded from the provincial total, the rest of the province would show hardly any increase at all (Table 6).*** In the eastern, southwestern and northern parts of the province virtually every county or district is expected to experience further enrolment declines for the balance of the century.

- The projected enrolment for most of the counties or districts outside the Central Ontario Region is expected to be about 80 or 90% of the 1976 level by 2001. However, enrolment in some areas (e.g. Peel) is expected to increase by over 60% between now and the turn of the century.

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* Dufferin, Peel and York Region will be the exceptions.

** Huron and Renfrew could decline by more than 25%.

*** In a number of areas, the actual enrolment could be higher than the projection because the effect of some large development projects such as the Steel complex in Haldimand/Norfolk and hydro stations in Bruce Peninsula have not been completely built into the projections. Furthermore, economic set backs like that in Sudbury might reduce enrolments in other areas.

TABLE 6

COMPARISON OF ENROLMENT CHANGE,
SELECTED AREAS VERSUS THE REST OF ONTARIO,
ELEMENTARY AND SECONDARY SCHOOLS,
1981-1996 AND 1991-2001

ELEMENTARY

AREA	CHANGE IN ENROLMENT 1981 TO 1996	PER CENT OF ONTARIO
Peel, Halton, York (RM) and Dufferin	+49,100	100
Rest of Ontario	0	0
Ontario	+49,100	100

SECONDARY

AREA	CHANGE IN ENROLMENT 1991 TO 2001	PER CENT OF ONTARIO
Peel, Halton, York (RM) and Dufferin	+17,100	63
Rest of Ontario	+10,100	37
Ontario	+27,200	100

NOTE: 1981 and 1991 represented the lowest enrolment level in the elementary and secondary trends respectively, while 1996 and 2001 represented roughly the enrolment peak in the elementary and secondary schools.

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Secondary:

A pattern similar to that for elementary schools is displayed by the secondary enrolment trend. However, the decline would be more extensive, both in territory and in degree than that in the elementary schools. Apart from a few areas in Central Ontario which showed a fairly distinctive upward trend, enrolment declines are expected in every part of the province from 1976 to 2001.*

E) Comparison of Projections Prepared by Various Agencies

To provide a further perspective on the most probable enrolment trends, the TEIGA estimate was compared with the projections prepared by other agencies (Figures 12 and 13).** However, in the process of comparison, the following factors should be kept in mind since they may distort the conclusions somewhat.

- Differences in projection techniques and use of different data bases i.e., county vs. province as a whole.***
- The Statistics Canada projections were based on grades while the figures shown for the other three projections covered all the age groups.

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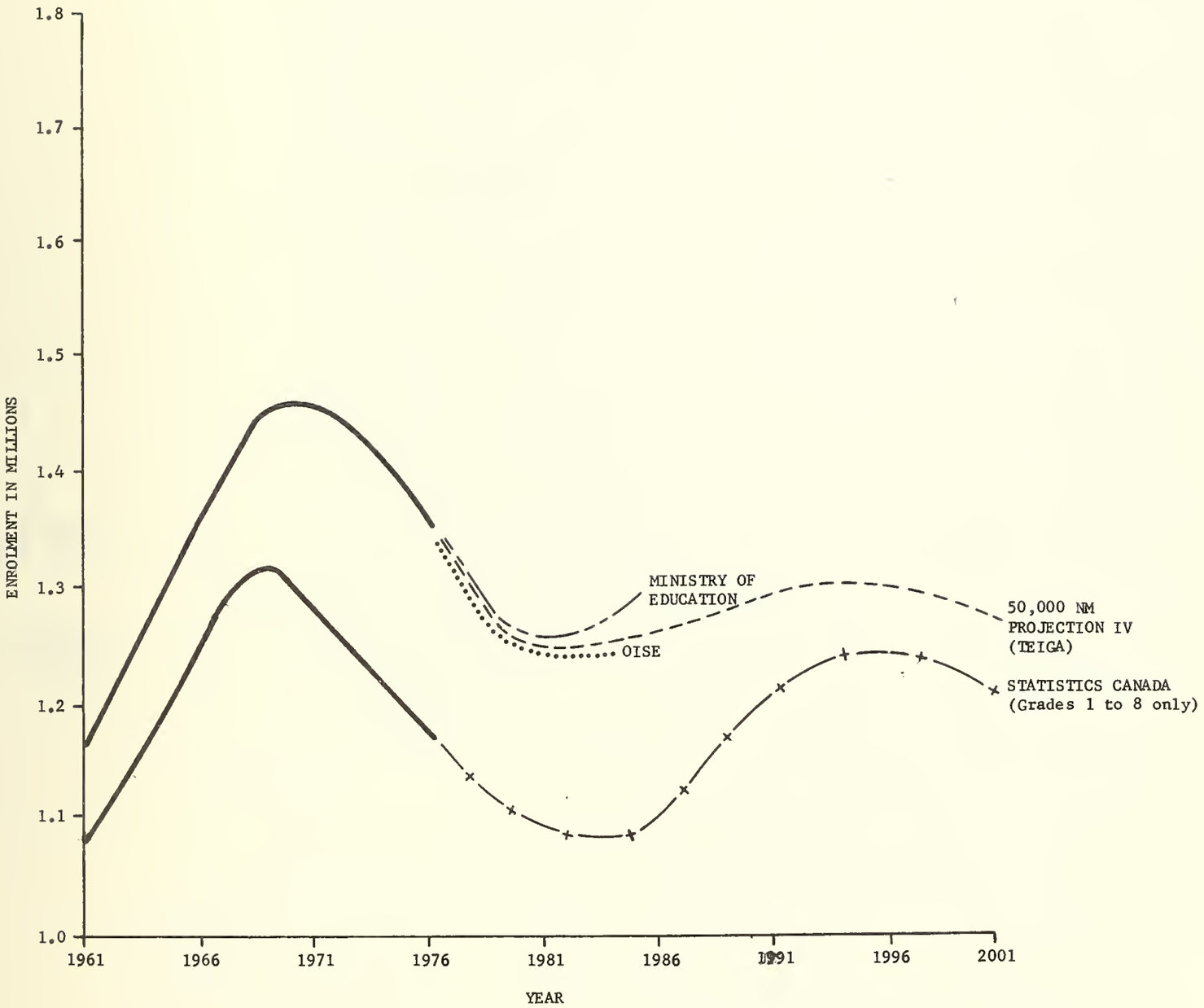
* The main locations would be Peel, York and Dufferin.

** The agencies were Ministry of Education, Ontario Institute for Studies in Education (OISE) and Statistics Canada, see Table 3 for further details.

*** See Table 3 and Figure 12 for further explanation.

FIGURE 12

COMPARISON OF ENROLMENT TRENDS PREPARED BY VARIOUS AGENCIES, ELEMENTARY SCHOOL, ONTARIO, 1961 TO 2001



NOTE: NM - Net Migration Per Year

The TEIGA elementary school projection shown here was obtained by summing all the county figures. The same procedure was also applied to the OISE projection. However, due to changes in municipal boundaries OISE has left out two counties (Durham and Northumberland) in the elementary school system and five counties (Durham, Northumberland, Peterborough, Simcoe and Victoria) in the secondary school system. To obtain the full provincial picture, an estimate was made for the left out counties and then added on to the partial total. In the case of OISE a separate overall provincial projection was also made. Comparing this separate provincial total with the one obtained by the county aggregation, it was discovered that the former estimate was about 50,000 higher.

In the secondary school system the difference in the projections produced by aggregating the counties and by separate provincial estimate was only marginal.

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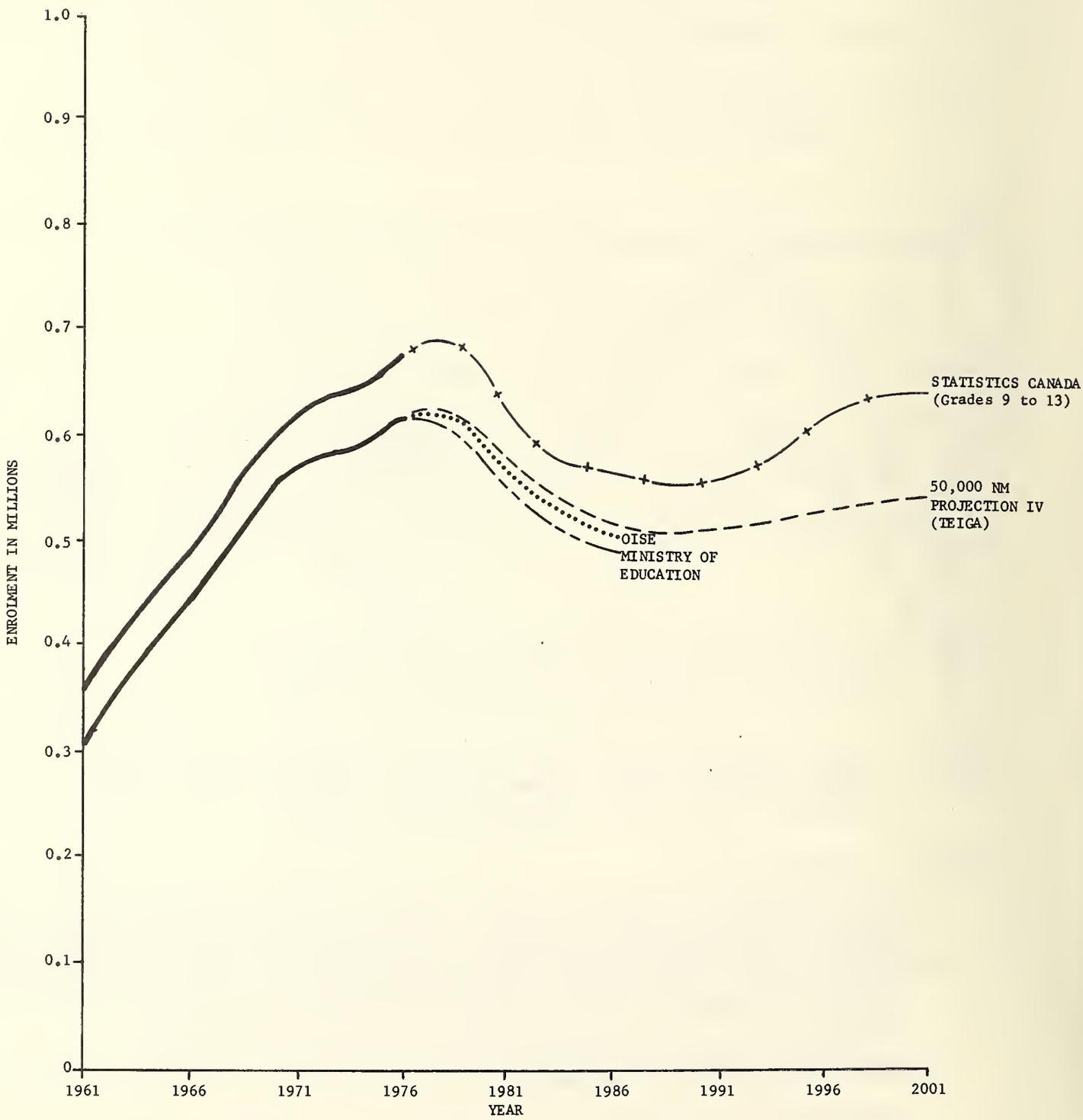
FIGURE 13

COMPARISON OF ENROLMENT TRENDS

PREPARED BY VARIOUS AGENCIES,

SECONDARY SCHOOL, ONTARIO

1961 TO 2001



NOTE: NM - Net Migration Per Year
See footnote in Figure 12

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Given the above qualifications, nevertheless, a number of observations can still be made.

- For the elementary school system, the projections prepared by TEIGA, (Projection IV), OISE and the Ministry of Education are remarkably similar up to 1981. Beyond that time, the TEIGA and the OISE trends exhibit fairly similar characteristics while the Ministry of Education estimates project a somewhat higher upturn in enrolment. The Statistics Canada projection which assumed a higher fertility and migration assumption than the TEIGA one, appeared to show the same pattern of change (i.e., same shape of curve) as that of the Ministry of Education projection. Presumably the Ministry of Education and the Statistics Canada projections have not taken account of continuing fertility declines.

- Similar conclusions can also be drawn for the secondary school enrolment trends. However, the extent of variation between the various projections here appears to be less than that in the elementary enrolment.

F) Conclusion

The discussion to this point indicates that of the five alternatives examined, the projection based on population Projection IV (Series "B") represents the most probable direction of enrolment change in the future. Furthermore, the projection is generally in line with the trends developed by some of the other agencies.

It was indicated in the earlier section that fertility probably exerted the strongest influence in the pattern of enrolment change. Under Projection IV, fertility is assumed to decline to about 1.6 births/woman in 1986 and then stay constant to 2001. The issue is how reasonable is this assumption, given the fact that changes in fertility have been very volatile. It has often been suggested that the present fertility trend would reverse itself soon. With a large number of women of child-bearing age in the population, there could be an abrupt change of trends. However, current social attitudes do not give any indication of such a change and the experts do not foresee such a change in the immediate future.*

The reasons cited for continuing low fertility are:

- Changes in social attitudes and availability of extremely effective birth-control measures.
- Decreasing fertility is not new and has extended over several generations now and has occurred in other developed countries as well.
- A shortening of the female's reproductive period.**

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* Jackson, R.W.G., A Demographic Mirage? or The Myth of the Echo of the Baby Boom, The Atlantic Institute of Education, 1977 and Implications for Education of Recent Trends in Live Births and International and Interprovincial Migration of Children, The Canadian Education Association, 1977.

** Jackson suggested the reproductive period of women should be 18 to 32 years, not the traditional 15 to 49 years. IBID.

- A substantial proportion of women in the child-bearing age group has passed the age of peak fertility.

The contention is that fertility will likely fall to a new minimum and remain constant thereafter. Indeed, recent economic conditions reinforce the above conclusion since tight economic conditions tend to have a depressing effect on fertility. Secondly, because of the economic situation, the present wave of child-bearing women who constituted the post-war baby-boom might decide to postpone having children for a few years (say, to the early 1980s). However, any postponement of family formation tends to reduce total family size.

Comparing the fertility rates used in Projection IV (i.e., the most probable trend) with the figures for some European countries, the assumptions appear realistic. The fertility rate in, say, Germany, Sweden and Switzerland has already dropped to between 1.5 and 1.8 births per woman per year.*

Besides the fertility rate, there are also a number of factors that might reduce the extent of enrolment in the future. First, around 1986, the number of child-

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* See Kogler, R., Demographic Trends in Western Europe, Ontario Demographic Bulletin, Ministry of Treasury, Economics and Intergovernmental Affairs, February, 1978.

bearing women will start to fall. Secondly, a tightening in admission criteria for immigrants and a possible closer tie of immigration levels with the labour market might reduce the migration flow to Canada. Thirdly, participation in the secondary school system might continue to decline.

All the above factors point to a lower number of school children in Ontario in the future. The fertility rate in the next few years will be crucial in that it will affect the enrolment change for the better part of the next quarter century.* If there is no drastic increase in immigration and/or fertility, which can not now be foreseen, the enrolment projection developed by TEIGA is the most probable trend for the future. Under this trend, growth in enrolment after 1981 will be very moderate, and the future level of enrolment (elementary and secondary) is not likely to return to the 1976 level. Such a situation will have an important impact on a number of education policies, for example, in planning for manpower, for facilities, for post-secondary education and in government expenditure.

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* The declining enrolment trend for 1976-1981 is fairly definite in that these children are already born (from 1971 to 1975).

How to avoid major social and economic dislocations during the transition from essentially an era of major expansion in the 1950s and 1960s to one of consolidation in the 1980s and 1990s is a major challenge to government and to the community at large. In the next section we shall examine only one aspect of the effects of enrolment, that is, the utilization of school facilities.

IV) EFFECTS OF ENROLMENT ON THE USE OF SCHOOL FACILITIES

Provision of school facilities is one of the most important aspects in the education planning process. Besides affecting the organization of the curriculum program, school transportation, deployment of teachers and community planning, construction and maintenance of the physical plants has been the second largest educational expenditure item and accounts for about one quarter of the current school board budget. In the past 25 years, the province has spent over three billion dollars in the construction of facilities to provide over two million new pupil places (Appendix 7). The result is that about 80% of the existing pupil places in the province are less than 25% years old.

While the main thrust of the capital outlay was to construct sufficient new places to satisfy the needs generated by the enrolment increase, a substantial part of the building program was aimed at compensating for the loss of school places resulting from the consolidation of small units into central schools and to replace some of the older and more obsolete structures. About two-thirds of all the pupil places constructed up to 1971 were for accommodation of new enrolment while the rest was for replacement and school consolidation purposes (Figure 14)*. Since

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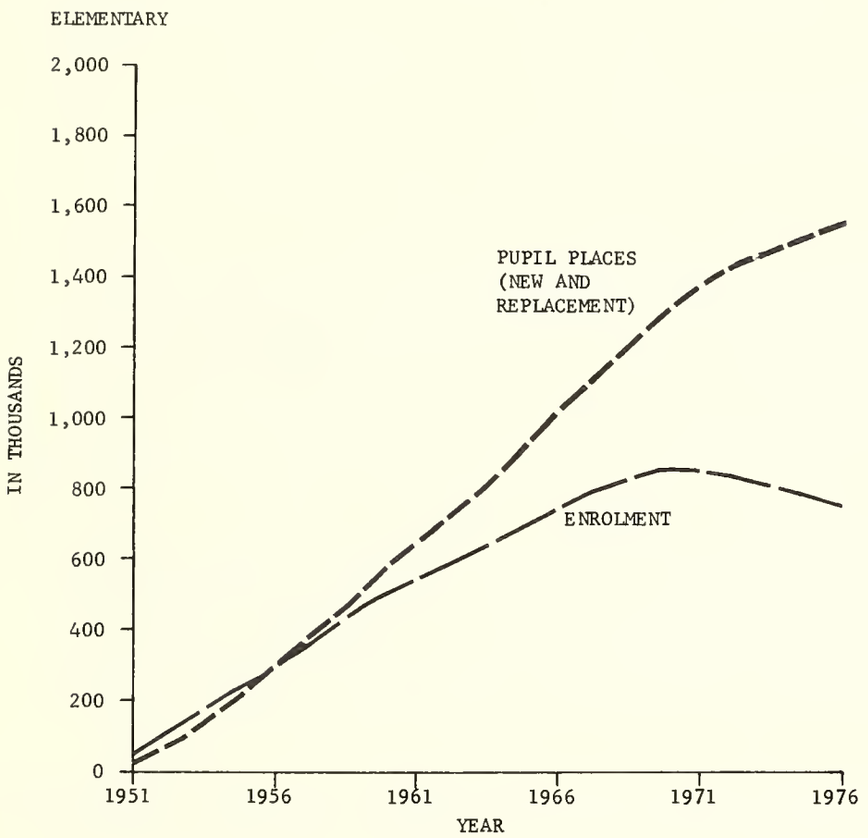
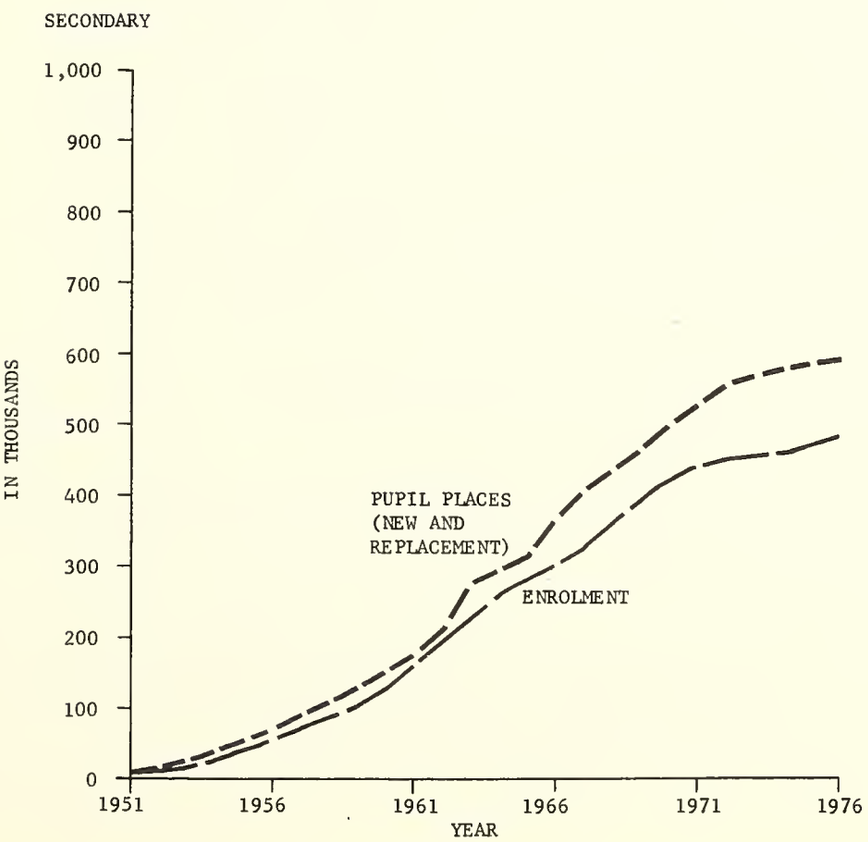
* 60% in the elementary and 80% in the secondary school systems

FIGURE 14

ACCUMULATED CHANGE IN ENROLMENT AND PUPIL PLACES (NEW AND REPLACEMENTS), ONTARIO 1951-1976





SOURCE: Based on data from Education Statistics, Ministry of Education

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Ministry of Treasury, Economics
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1971 the rate of the overall school construction program began to slow down because of changes in enrolment trends and because the school consolidation process was fairly well completed.

As noted in the earlier discussions, while the overall level of elementary enrolment in Ontario recently has shown a decrease, a number of locations continued to experience enrolment growth and this necessitated the construction of more pupil places. At the same time, under-utilization of school facilities was found in many parts of the province because of enrolment declines.

To obtain a perspective on the current utilization of school facilities, a comparison was made between the school enrolment and its "effective capacity". The "effective" capacity was taken as 90% of the "rated capacity", a pupil loading measure used by the Ministry of Education for calculating legislative grants.* It is generally felt that the "effective capacity" is probably a more realistic yardstick for calculating the rate of utilization than the "rated capacity" in the light of recent trends in class size and the 90% is commonly accepted as a standard conversion

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* For further details on the formula for calculating the "rated capacity", see Capital Grant Plan, 1971, Ontario Department of Education, 1971.

factor. Using the 1975 enrolment and "effective capacity" information, a rate of utilization factor (measured in percentage) was computed for each of the schools in Ontario and the results were grouped into categories.* Here is a list of the major observations based on the 1975 condition.

- A considerable number of schools in Ontario including public, separate and secondary were noticeably underutilized. For example, over two-fifths of all the elementary schools (public and separate) and a fifth of the secondary schools were operating at 75% or less of their capacity (Table 7).**
- The relative pattern of utilization between the public and the separate schools were very similar. However, in the secondary system the schools were more fully utilized largely because the enrolment decline has not yet taken place (Table 7).
- The underutilization in school facilities occurred in all parts of the province including the rural areas and the metropolitan complexes (Table 8, Figures 15, 16 and 17). At the same time, overutilization of facilities was also found in some parts of Ontario, a result of uneven population growth.*** In these instances, portable facilities were generally utilized.
- All sizes of schools were affected but the majority were in the medium categories (Table 9).

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* Schools for the handicapped and portable class rooms were excluded.

** In the elementary school system, the number of schools would be close to three-fifths of the total while in the secondary school system the figure would be approximately two-fifths if the "rated capacity" is used as the criteria, Appendix 8.

*** A good example is Peel Region which is the fastest growth area in Ontario. Most of the population growth took place in the southern part of the region thus leaving the school facilities in the northern part underutilized.

TABLE 7

SUMMARY OF SCHOOL UTILIZATION, BASED ON EFFECTIVE CAPACITY
PUBLIC, SEPARATE AND SECONDARY, ONTARIO, 1975-1976

TYPE OF SCHOOL	SCHOOL UTILIZATION (ENROLMENT/CAPACITY)					
	50% OR LESS	51-75%	76-90%	91-110%	111% AND OVER	TOTAL
Public						
No.	172	912	764	573	218	2,639
%	(7%)	(34%)	(29%)	(22%)	(8%)	(100%)
Separate						
No.	111	483	331	255	133	1,314
%	(8%)	(37%)	(25%)	(20%)	(10%)	(100%)
Secondary						
No.	11	113	170	221	52	567
%	(2%)	(20%)	(30%)	(39%)	(9%)	(100%)
All Schools						
No.	293	1,503	1,266	1,053	404	4,520
%	(7%)	(33%)	(28%)	(23%)	(9%)	(100%)

SOURCE: Compiled by Social and Economic Data, Central Statistical Services, Ministry of Treasury, Economics and Intergovernmental Affairs, based on synthesis of information from the Ministry of Education, Education Directories and special interviews.

NOTE: No. refers to the number of schools, % refers to the percentage of the schools in the category.

The "rated" capacity is used by the Ministry of Education. However, the school board also used another concept called "effective" capacity which is defined to be about 90% of the rated capacity.

TABLE 8

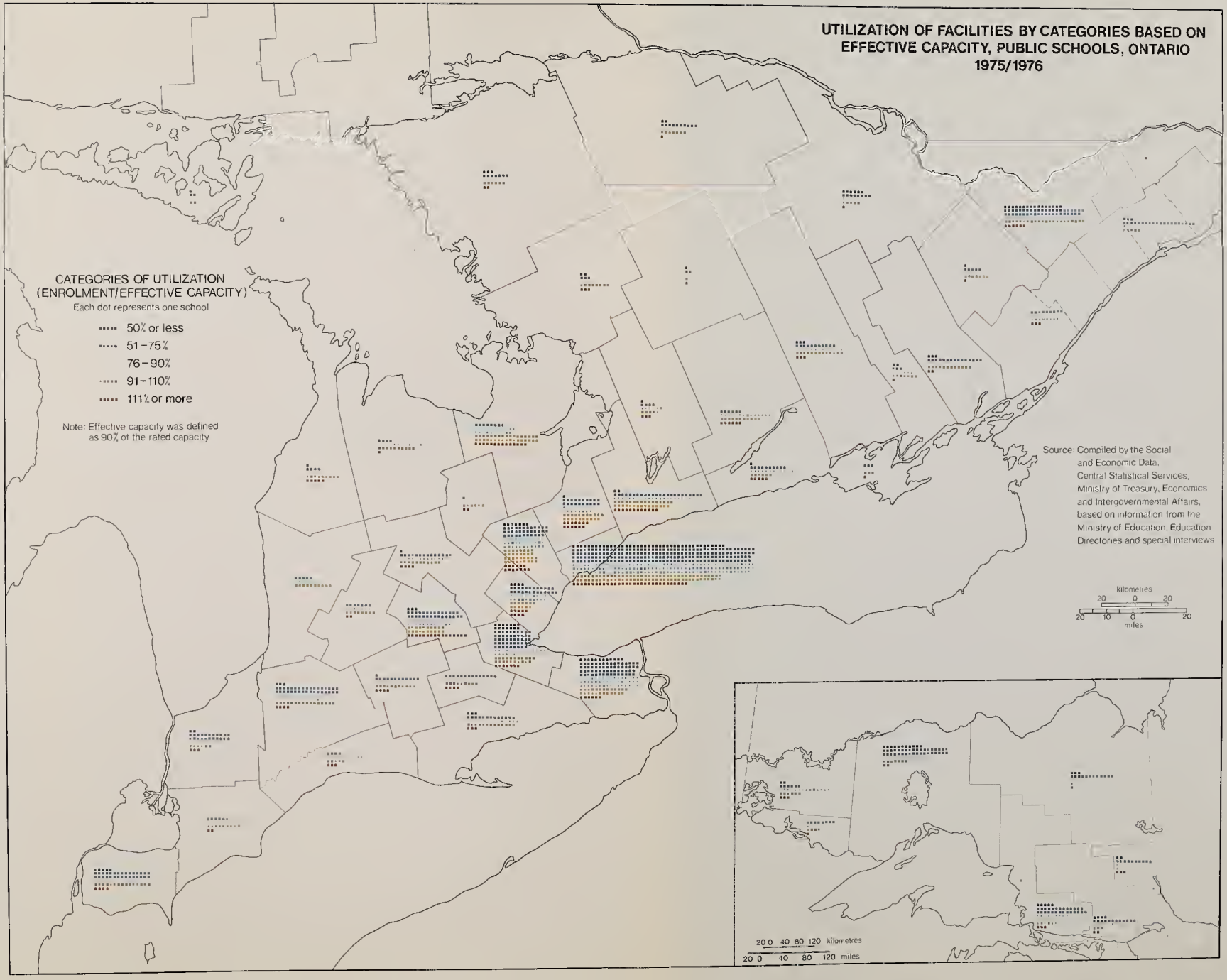
SUMMARY OF SCHOOL UTILIZATION BY REGION, BASED ON EFFECTIVE CAPACITY, PUBLIC, SEPARATE AND SECONDARY SCHOOLS, 1975/1976

REGION	NUMBER OF SCHOOLS BY CATEGORIES OF UTILIZATION (ENROLMENT/EFFECTIVE CAPACITY)					
	50% OR LESS	51-75%	76-90%	91-110%	111% OR MORE	TOTAL
PUBLIC						
CENTRAL						
No.	93	511	441	350	153	1,548
%	(6%)	(33%)	(28%)	(23%)	(10%)	(100%)
SOUTHWESTERN						
No.	12	129	128	99	28	396
%	(3%)	(33%)	(32%)	(25%)	(7%)	(100%)
EASTERN						
No.	34	117	99	82	19	351
%	(10%)	(33%)	(28%)	(24%)	(5%)	(100%)
NORTHEASTERN						
No.	20	105	62	25	12	224
%	(9%)	(47%)	(28%)	(11%)	(5%)	(100%)
NORTHWESTERN						
No.	13	50	34	17	6	120
%	(11%)	(42%)	(28%)	(14%)	(5%)	(100%)
SEPARATE						
CENTRAL						
No.	8	58	90	104	42	302
%	(3%)	(19%)	(30%)	(34%)	(14%)	(100%)
SOUTHWESTERN						
No.	1	17	30	40	5	93
%	(1%)	(18%)	(32%)	(43%)	(6%)	(100%)
EASTERN						
No.	2	18	26	43	2	91
%	(2%)	(20%)	(29%)	(47%)	(2%)	(100%)
NORTHEASTERN						
No.	0	9	19	25	3	56
%	(0%)	(16%)	(34%)	(45%)	(5%)	(100%)
NORTHWESTERN						
No.	0	9	8	8	0	25
%	(0%)	(36%)	(32%)	(32%)	(0%)	(100%)
SECONDARY						
CENTRAL						
No.	30	181	136	137	89	573
%	(5%)	(32%)	(24%)	(24%)	(15%)	(100%)
SOUTHWESTERN						
No.	6	68	56	46	17	195
%	(3%)	(35%)	(29%)	(24%)	(9%)	(100%)
EASTERN						
No.	49	128	51	34	9	271
%	(18%)	(47%)	(19%)	(13%)	(3%)	(100%)
NORTHEASTERN						
No.	24	91	76	28	10	229
%	(11%)	(40%)	(33%)	(12%)	(4%)	(100%)
NORTHWESTERN						
No.	2	15	12	8	9	46
%	(4%)	(33%)	(26%)	(17%)	(20%)	(100%)

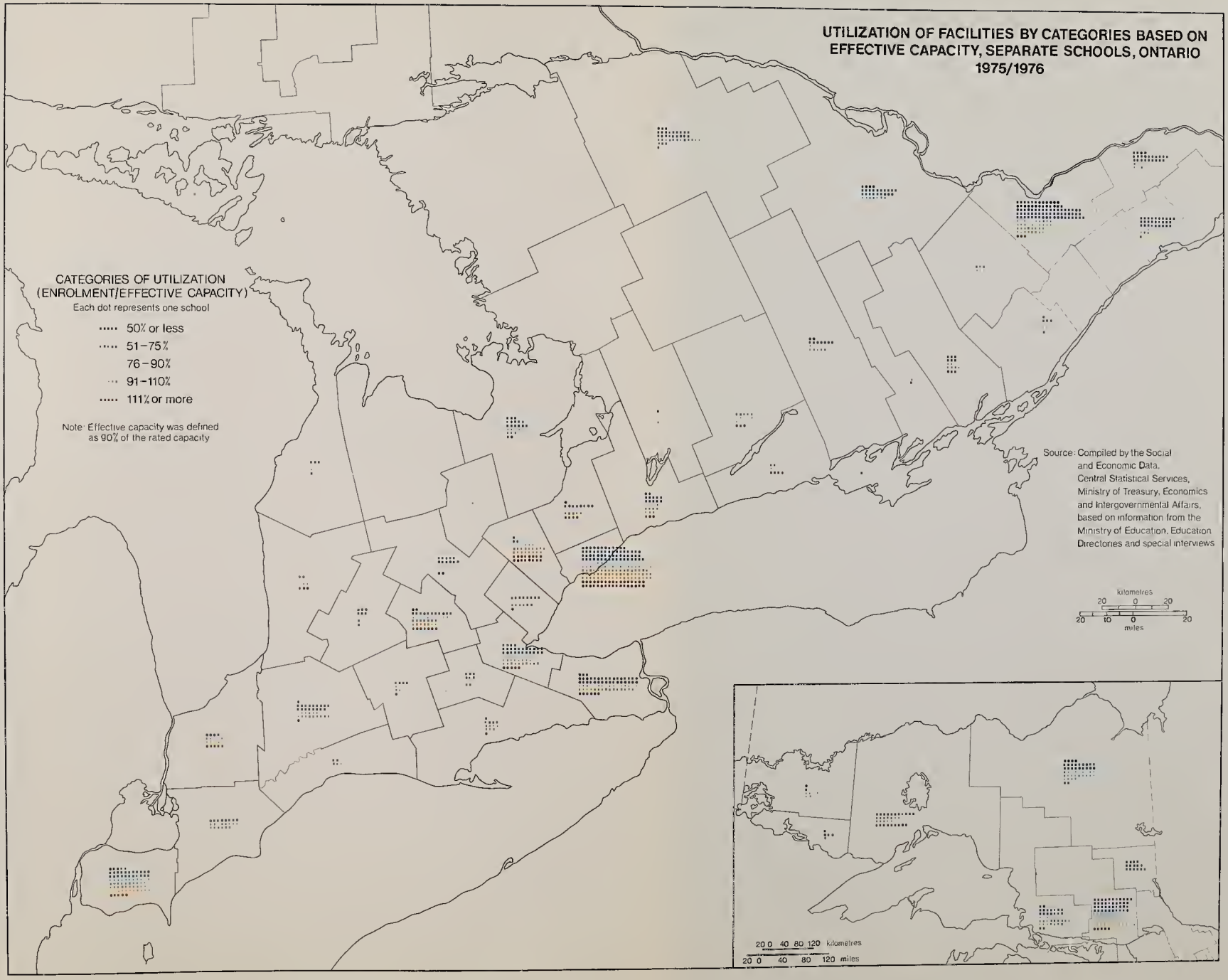
NOTE: No. refers to the number of schools, % refers to the percentage of the schools in the region.

SOURCE: Compiled by Social and Economic Data, Central Statistical Services, Ministry of Treasury, Economics and Intergovernmental Affairs, based on synthesis of information from the Ministry of Education, Education Directories and special interviews.

UTILIZATION OF FACILITIES BY CATEGORIES BASED ON EFFECTIVE CAPACITY, PUBLIC SCHOOLS, ONTARIO 1975/1976



UTILIZATION OF FACILITIES BY CATEGORIES BASED ON EFFECTIVE CAPACITY, SEPARATE SCHOOLS, ONTARIO 1975/1976



UTILIZATION OF FACILITIES BY CATEGORIES BASED ON EFFECTIVE CAPACITY, SECONDARY SCHOOLS, ONTARIO 1975/1976

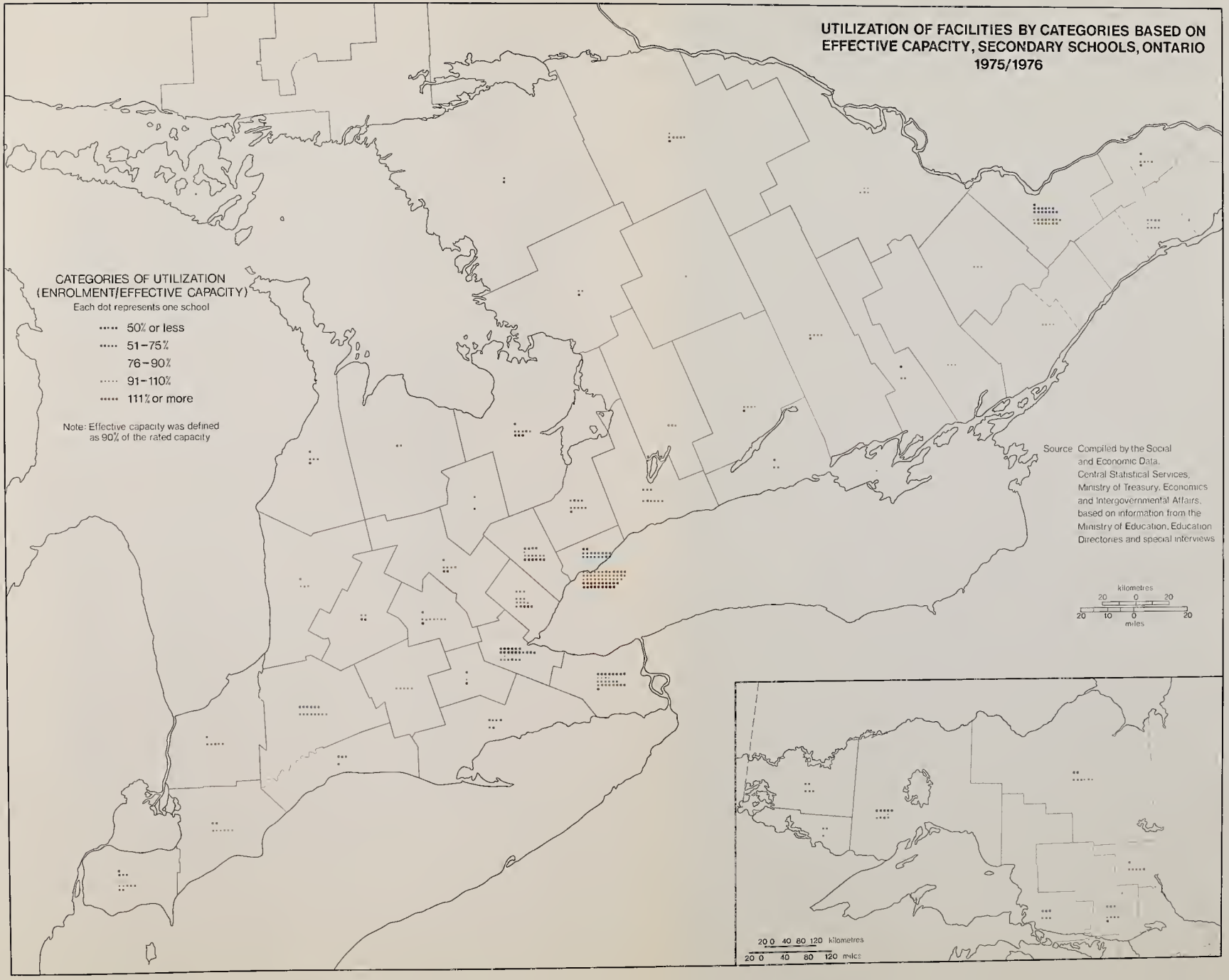


TABLE 9

PROPORTION OF SCHOOLS BY SIZE GROUPS FOR THOSE SCHOOLS WITH CAPACITY UTILIZATION (BASED ON EFFECTIVE CAPACITY) OF 75 PER CENT AND LESS, ONTARIO, 1975/1976

TYPE OF SCHOOL	NUMBER OF SCHOOLS BY SIZE				PER CENT OF TOTAL			
	SMALL	MEDIUM	LARGE	TOTAL	SMALL	MEDIUM	LARGE	TOTAL
Public	162	660	262	1,084	15	61	24	100
Separate	96	403	95	594	16	68	16	100
Secondary	33	71	20	124	27	57	16	100
All Schools	291	1,134	377	1,802	16	63	21	100

NOTE: Proportion of schools with capacity utilization of 75 per cent and less as a percentage of the total number of schools in Ontario = 40 per cent.
For definition of small, medium and large see other tables.

Social and Economic Data
Central Statistical Services
Ministry of Treasury, Economics
and Intergovernmental Affairs, 1978

It was revealed in the previous section that almost every county in Ontario will experience further enrolment decline between now and the early 1980s. After that, the trend in a few of the counties would probably reverse while the rest of the province will continue to decline.

How would this pattern of enrolment affect the use of existing school facilities in various parts of the province? To examine this issue, the "pupil catchment area" of the school or cluster of schools, that is the school boundary, was selected as the basis for calculating capacity utilization. It was felt that the school boundary area is a far more meaningful geographical unit for analysis than the county because the latter is too large, and capacity available at one part of the county may not be suitable for accommodating enrolment in another part.

Accordingly, a survey was carried out to determine the limits of the school boundary areas. The projected county enrolments were then allocated to these school boundary areas guided by the projected pattern of population distribution. A capacity utilization factor was computed using the projected enrolment (Projection IV) and the 1975 effective capacity for each of the school boundary areas.

The analysis covered all parts of the province

except northern Ontario and the five regional municipalities in the Toronto-Hamilton urban complex (i.e., the regional municipalities of Durham, York, Metro Toronto, Peel, Halton and Hamilton/Wentworth).*

Northern Ontario was excluded largely because the nature of the regional economy made it exceedingly difficult to make projection on a small geographical area. Within the Toronto-Hamilton urban complex, the uncertainty in some of the major development policies also made it impractical and perhaps meaningless to made any enrolment projection at the detailed level at this time.**

The years 1981 and 1996 were chosen as the target dates for analysis in the elementary system because they represented the dates at which the minimum and the maximum enrolment levels could be expected in the rest of the century. For similar reasons, 1986 and 2001 were chosen for the secondary school analysis.

The rates of utilization were then classified into categories and summarized in Figures 18 to 21. It

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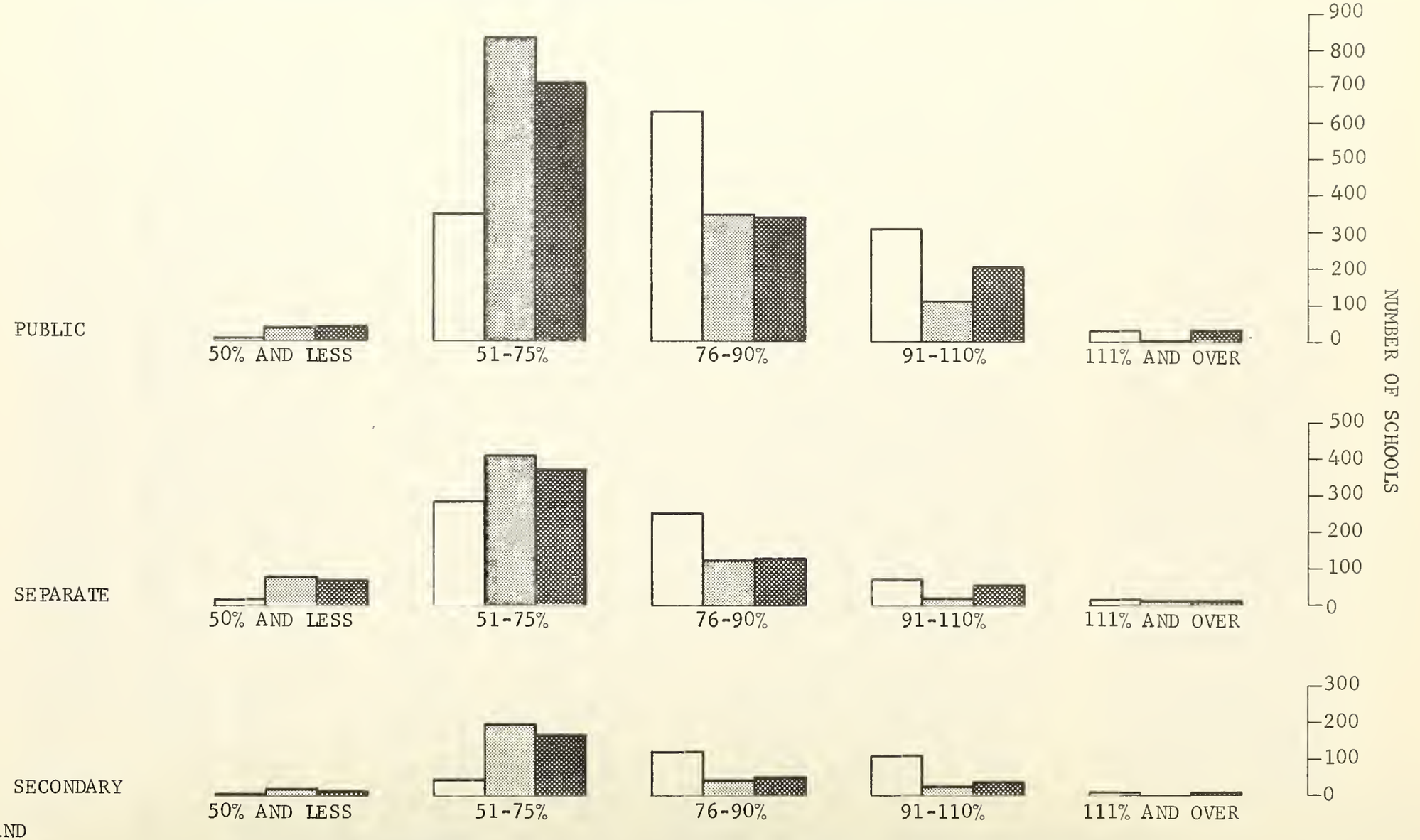
* The area under study covered about half of all the schools in the elementary and secondary systems.

** For example, the regional municipalities are still in the process of finalizing their official plans.

FIGURE 18

NUMBER OF SCHOOLS BY UTILIZATION CATEGORIES (BASED ON EFFECTIVE CAPACITY) FOR SELECTED COUNTIES; PUBLIC, SEPARATE AND SECONDARY SCHOOLS, 1975, 1981, 1986, 1996 AND 2001

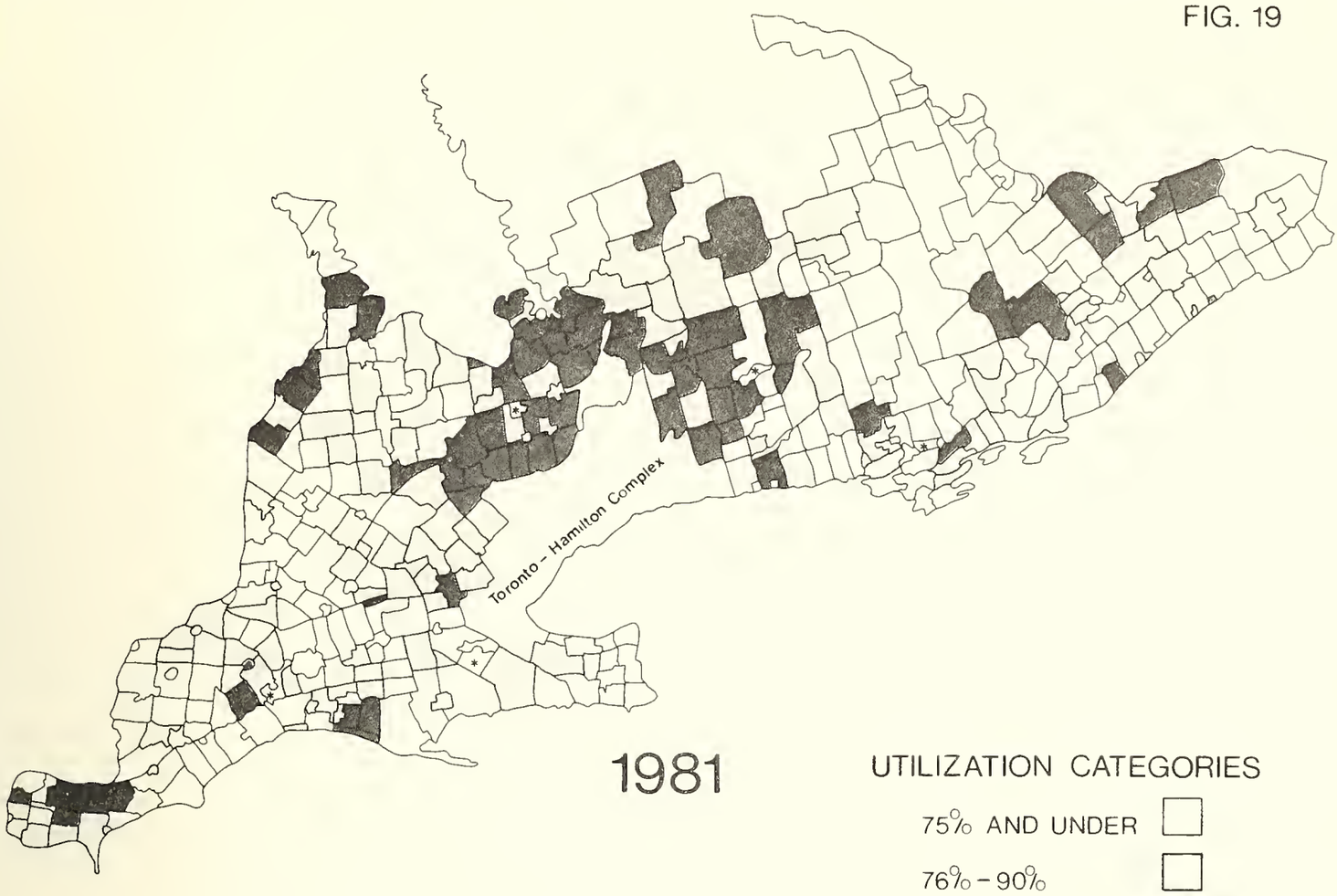


NOTE: PUBLIC AND SEPARATE 1975 1981 1996; SECONDARY 1975 1986 2001

% refers to categories of utilization

SOURCE: Social and Economic Data
Central Statistical Services
Ministry of Treasury, Economics
and Intergovernmental Affairs, 1978

FIG. 19



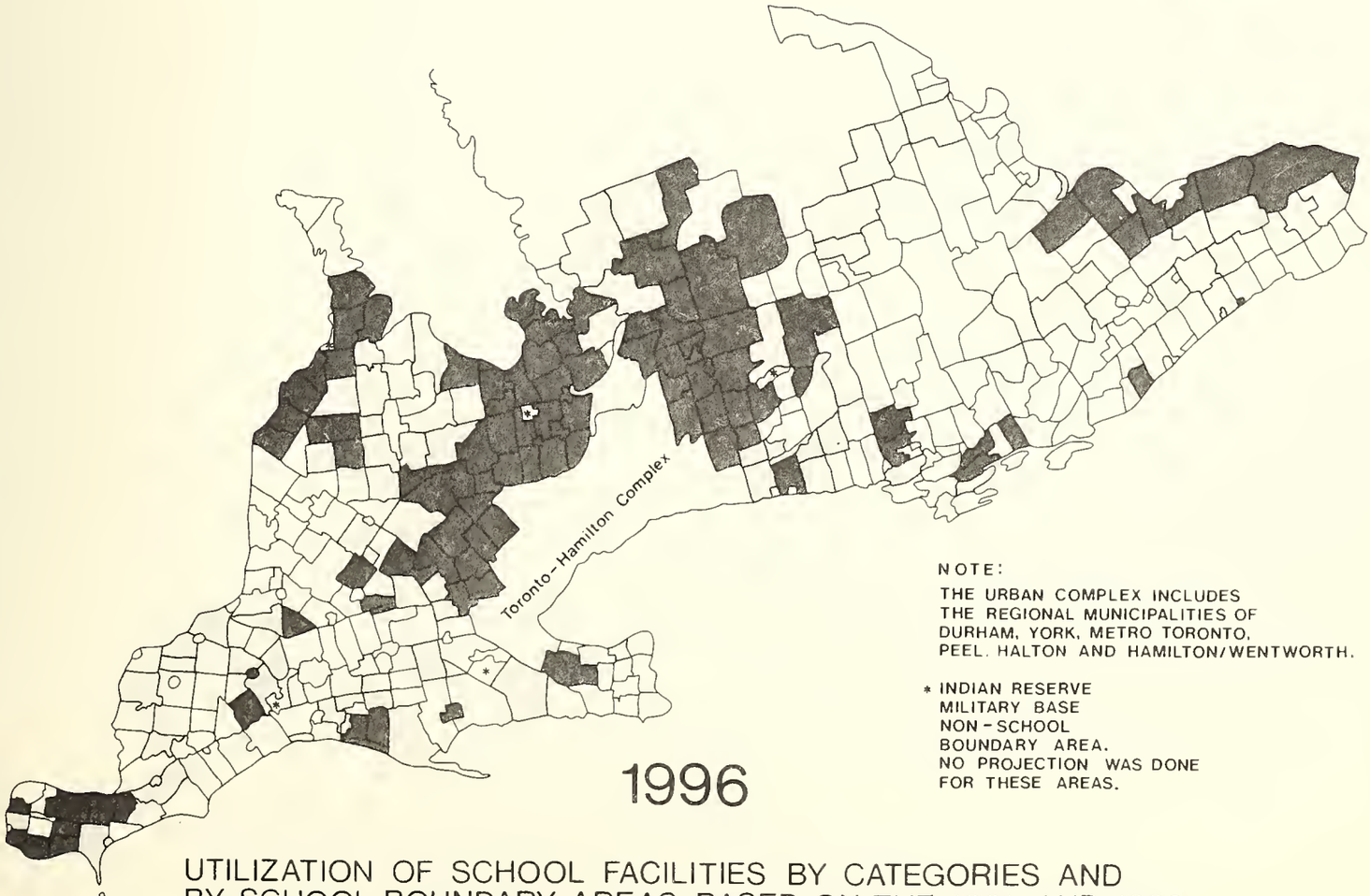
1981

UTILIZATION CATEGORIES

75% AND UNDER

76% - 90%

91% AND OVER



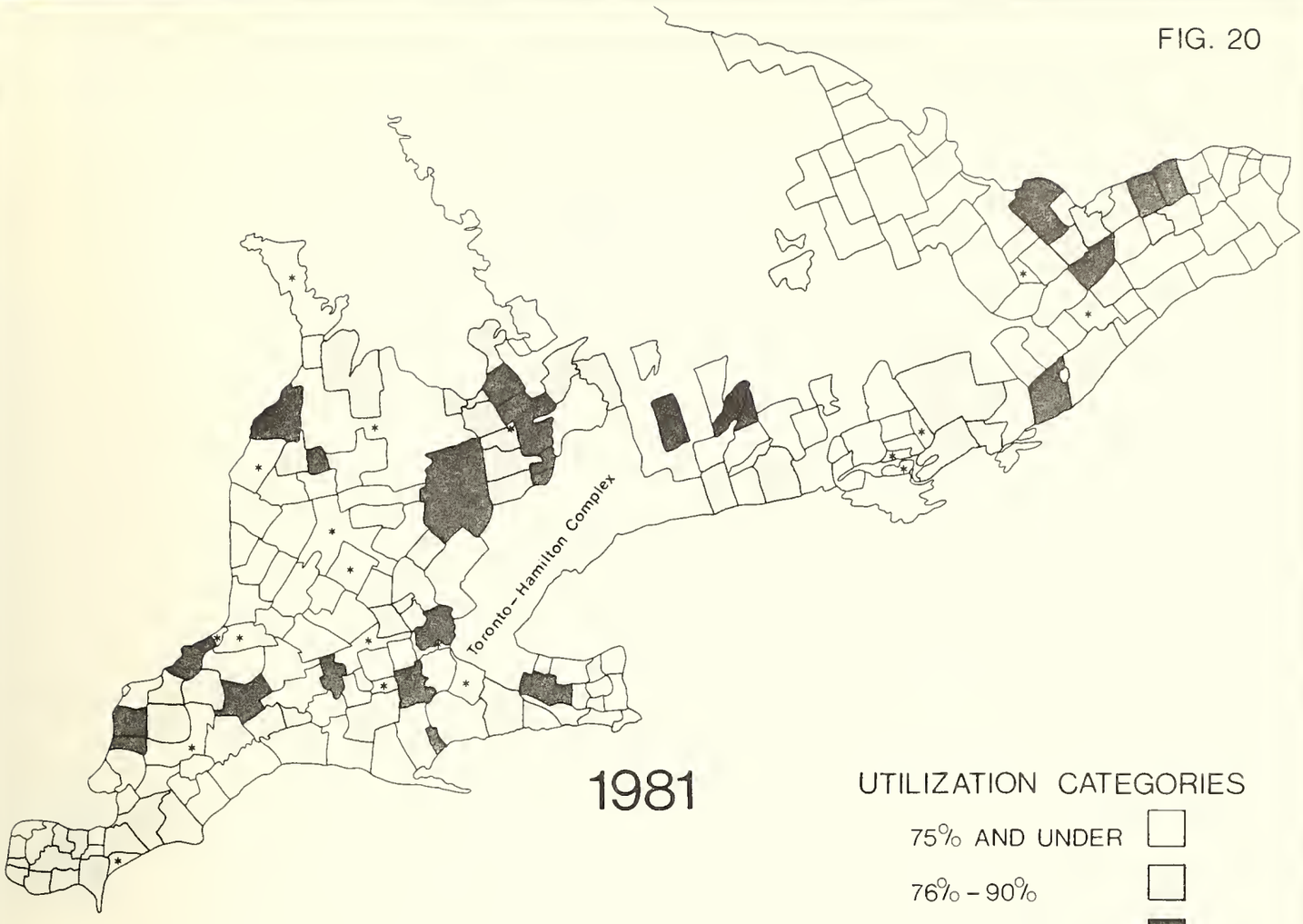
1996

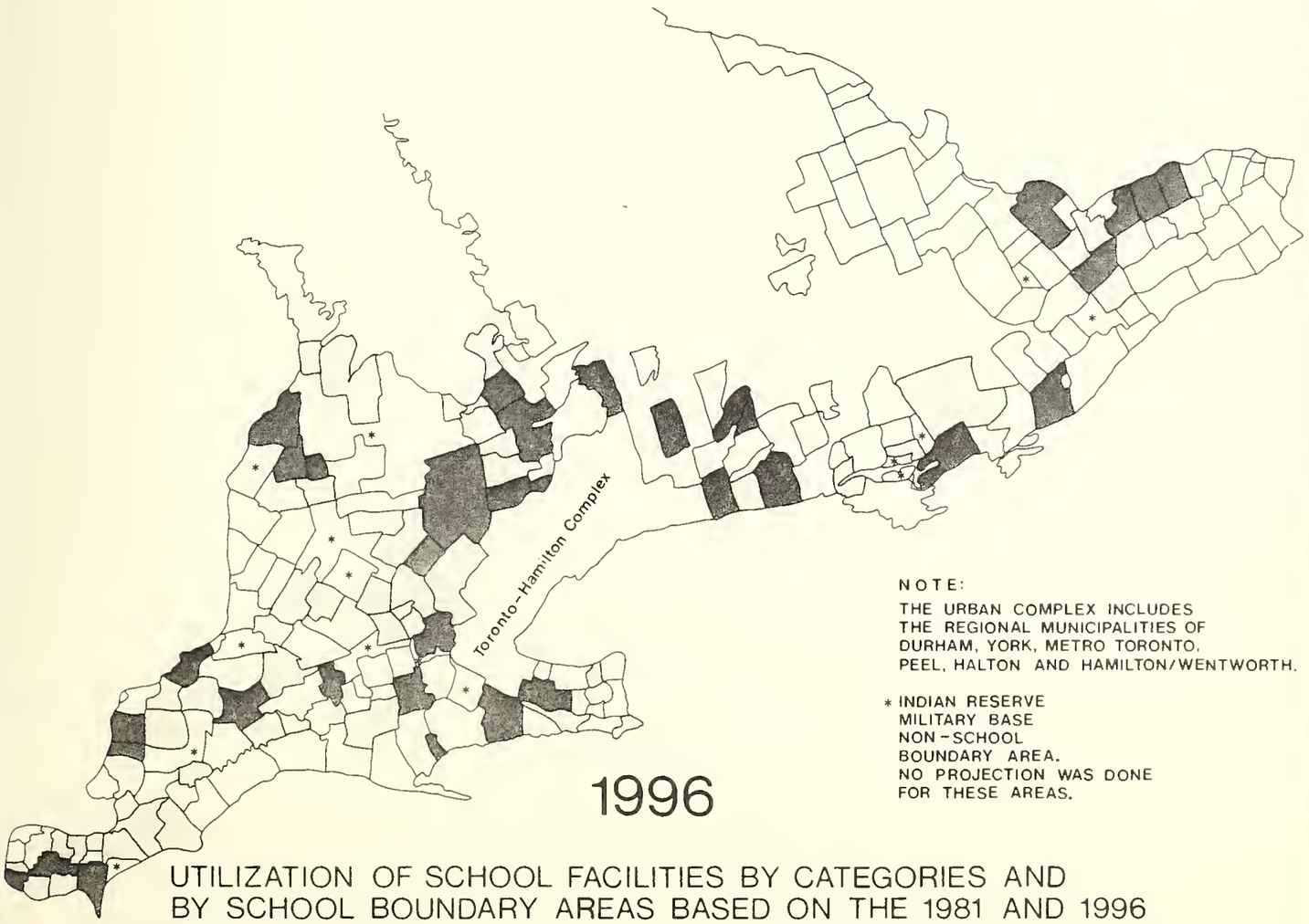
NOTE:
THE URBAN COMPLEX INCLUDES THE REGIONAL MUNICIPALITIES OF DURHAM, YORK, METRO TORONTO, PEEL, HALTON AND HAMILTON/WENTWORTH.

* INDIAN RESERVE
MILITARY BASE
NON - SCHOOL
BOUNDARY AREA.
NO PROJECTION WAS DONE
FOR THESE AREAS.

UTILIZATION OF SCHOOL FACILITIES BY CATEGORIES AND BY SCHOOL BOUNDARY AREAS BASED ON THE 1981 AND 1996 ENROLMENT PROJECTION AND THE 1975/1976 EFFECTIVE CAPACITY, PUBLIC SCHOOL

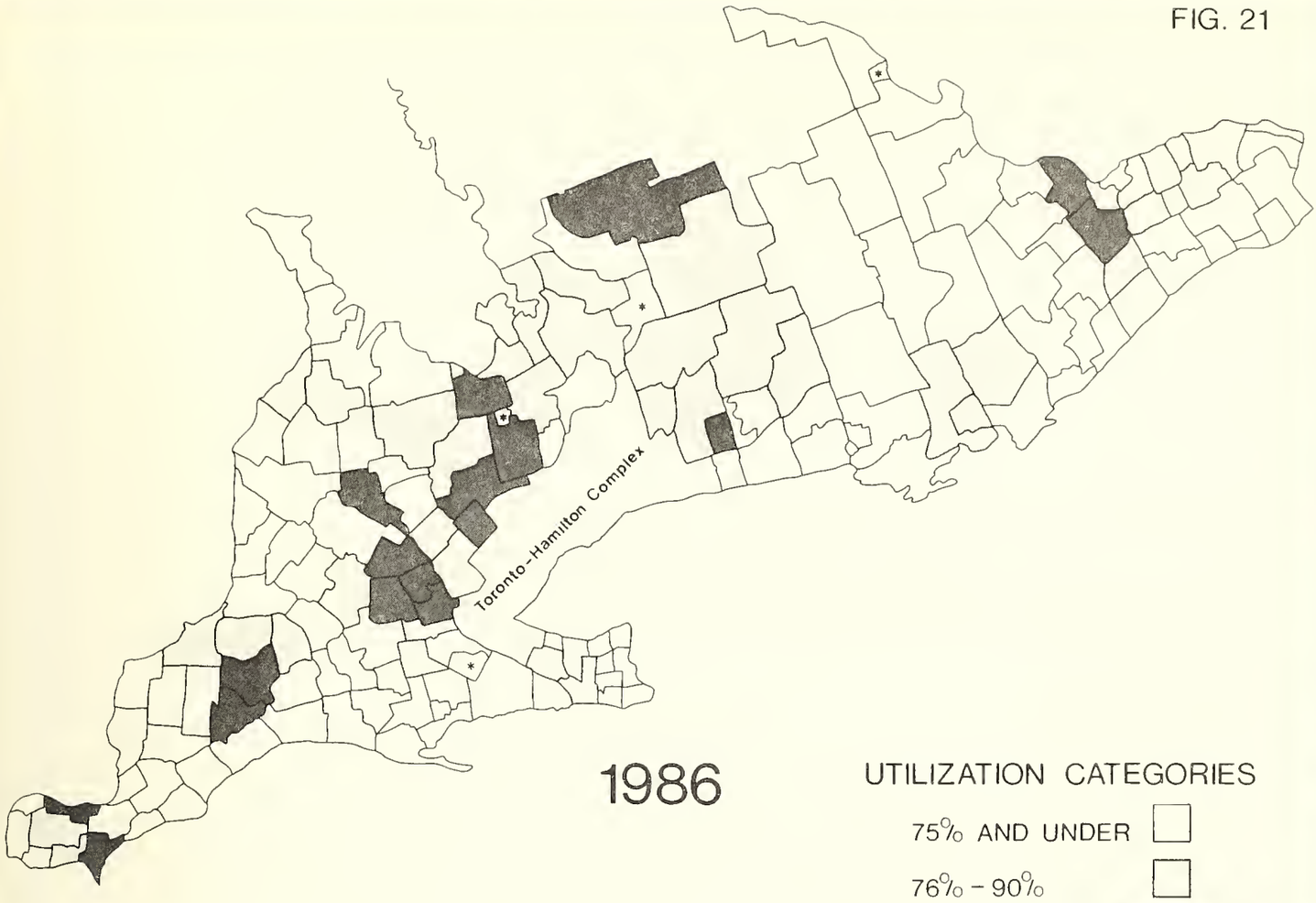
FIG. 20





UTILIZATION OF SCHOOL FACILITIES BY CATEGORIES AND BY SCHOOL BOUNDARY AREAS BASED ON THE 1981 AND 1996 ENROLMENT PROJECTION AND THE 1975/1976 EFFECTIVE CAPACITY, SEPARATE SCHOOL

FIG. 21



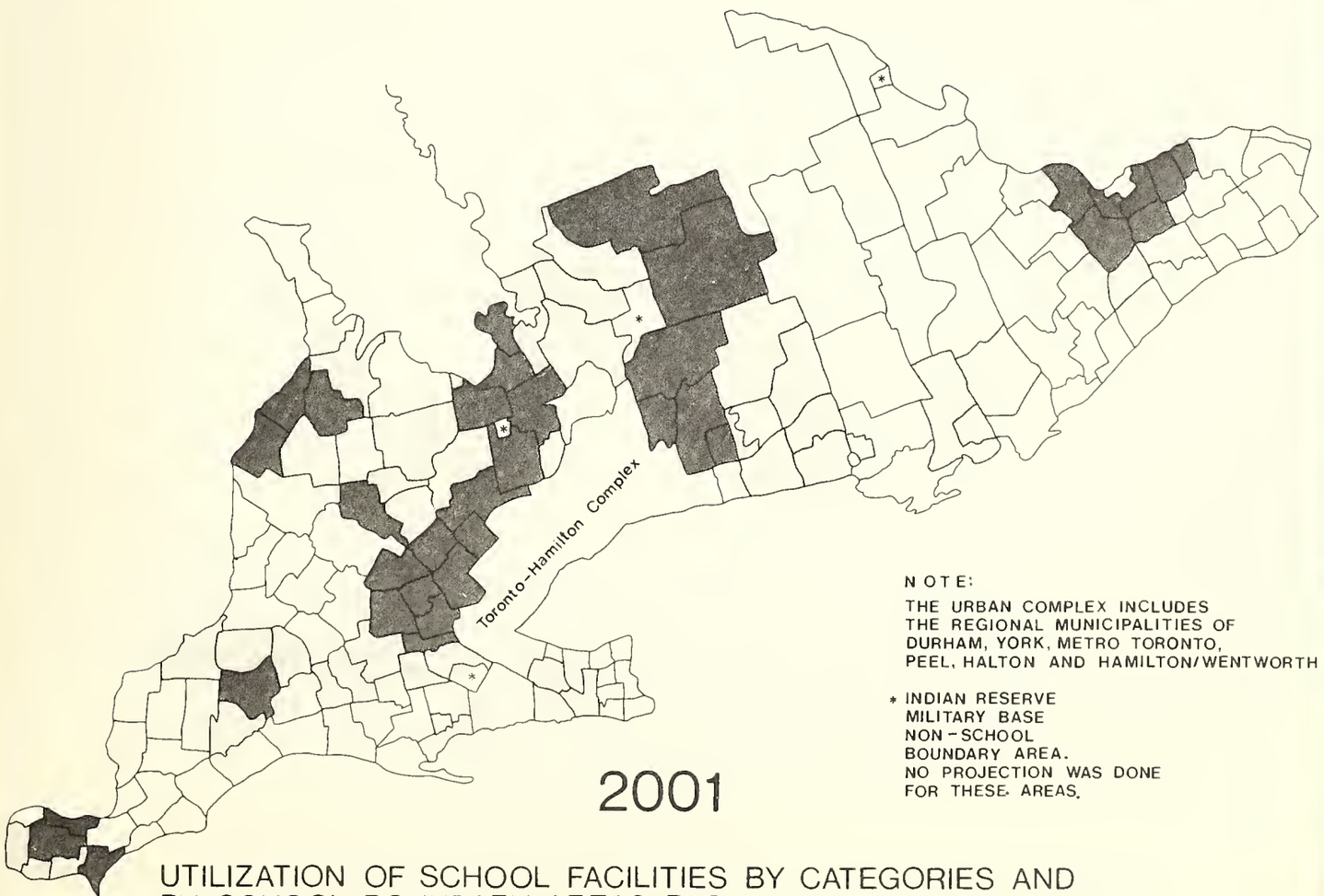
1986

UTILIZATION CATEGORIES

75% AND UNDER

76% - 90%

91% AND OVER



2001

NOTE:

THE URBAN COMPLEX INCLUDES THE REGIONAL MUNICIPALITIES OF DURHAM, YORK, METRO TORONTO, PEEL, HALTON AND HAMILTON/WENTWORTH

* INDIAN RESERVE
MILITARY BASE
NON-SCHOOL
BOUNDARY AREA.
NO PROJECTION WAS DONE
FOR THESE AREAS.

UTILIZATION OF SCHOOL FACILITIES BY CATEGORIES AND BY SCHOOL BOUNDARY AREAS BASED ON THE 1986 AND 2001 ENROLMENT PROJECTION AND THE 1975/1976 EFFECTIVE CAPACITY, SECONDARY SCHOOL

should be noted that the enrolment projection was based on trend condition. In a number of locations in the province (e.g., Norfolk/Haldimand, Bruce and Simcoe counties), because of the committed and proposed development projects and policies, the resultant enrolment and thus the rates of capacity utilization would be somewhat higher than those shown in the figures.

- Except in a few locations, the existing school facilities would be sufficient to accommodate the projected level of enrolment for the balance of the century. In the elementary system, the proportion of schools operating at 75% or less of their capacity will increase from about a third to two-thirds of all the schools included in the analysis between 1975 and 1981. Even during the peak enrolment rise in 1996, while there will be some increase in the rates of utilization in some areas for most of the schools, the level will be considerably lower than that in 1975.

- The decline in the rate of capacity utilization in the public school system is expected to be more extensive than in the separate schools.

- A similar capacity surplus situation is also expected in the secondary school system except that the declining rate of utilization here would be greater than the elementary schools. In 1975, about a quarter of all the schools analyzed were operated at 75% or less of their capacity and the proportion will likely increase to three-quarters of the total. The situation is not likely to change appreciably even by the turn of the century.

- In the elementary and secondary schools, most of the schools with higher rates of utilization (i.e., more than 90%) will be concentrated into four main locations, namely, north of the Toronto/Hamilton urban complex, part of Bruce Peninsula, the areas outside the cities of Windsor and Ottawa. However, in the separate school system no definite pattern was noted.

- It was indicated earlier that no analysis was carried out within the Toronto/Hamilton urban complex. However, on the basis of the existing utilization results (Figures 15 to 17) and the projected level of enrolment by regional municipalities, it is expected that Metropolitan Toronto and especially Hamilton/Wentworth are expected to experience fairly substantial surplus in school capacity for the balance of the century.

APPENDICES

APPENDIX 1

COUNTY ENROLMENT TREND, PUBLIC SCHOOL SYSTEM,
1966 TO 1976

COUNTY	ENROLMENT INDEX (1966 = 100)										
	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
CENTRAL ONTARIO REGION											
Brant	100	101	101	103	102	101	98	98	95	93	92
Dufferin	100	106	111	123	127	131	136	147	151	151	156
Durham (R.M.)	100	106	110	114	115	115	114	113	110	111	109
Haldimand/Norfolk	100	101	102	108	108	105	103	99	96	95	91
Haliburton	100	102	107	102	117	119	115	111	112	112	112
Halton	100	107	113	116	117	118	117	117	116	116	113
Muskoka (R.M.)	100	103	108	112	114	113	110	109	109	108	106
Niagara (R.M.)	100	101	102	102	100	98	96	93	91	90	87
Northumberland*	100	101	104	113	110	109	106	105	97	91	89
Peel (R.M.)	100	108	120	128	134	141	149	153	155	155	158
Peterborough*	100	100	100	101	101	100	99	95	97	96	94
Simcoe*	100	105	107	111	113	113	113	114	115	115	115
Victoria*	100	102	107	114	115	116	114	113	117	118	118
Waterloo (R.M.)	100	103	104	107	108	109	109	110	110	110	111
Wellington	100	104	106	110	110	110	109	109	109	108	108
Hamilton/Wentworth (R.M.)	100	100	100	100	99	96	93	89	87	84	81
Metro Toronto	100	102	103	105	105	103	103	99	95	93	89
York (R.M.)	100	106	109	111	114	114	113	113	111	109	107
SOUTHWESTERN ONTARIO REGION											
Bruce	100	101	105	107	112	116	116	116	120	123	123
Elgin	100	99	103	109	108	108	107	107	107	107	106
Essex	100	101	103	104	104	101	100	97	95	92	90
Grey	100	102	106	108	107	104	102	101	100	100	98
Huron	100	99	104	106	104	98	96	94	92	90	88
Kent	100	104	105	107	105	103	100	98	96	93	91
Lambton	100	101	103	103	100	96	92	89	87	84	84
Middlesex	100	104	106	109	109	101	105	104	101	99	96
Oxford	100	101	104	107	106	103	100	96	96	93	91
Perth	100	103	104	105	106	103	101	99	96	95	92
EASTERN ONTARIO REGION											
Dundas/Glengarry/Stormont	100	102	102	106	105	102	98	95	93	91	87
Frontenac	100	104	104	107	107	106	104	100	97	93	89
Leeds/Grenville	100	104	105	109	109	107	105	101	99	97	96
Hastings	100	102	100	106	103	101	97	93	91	89	87
Lanark	100	100	101	104	103	100	97	96	94	93	92
Lennox/Addington	100	101	107	112	118	120	123	123	121	121	120
Ottawa/Carleton	100	105	108	114	116	115	113	111	109	108	105
Prescott/Russell	100	119	126	71	76	82	82	85	85	90	100
Prince Edward	100	103	117	114	114	111	109	105	102	98	94
Renfrew	100	99	98	97	96	93	88	84	79	78	75
NORTHEASTERN ONTARIO REGION											
Algoma	100	101	103	105	102	100	97	93	91	89	87
Cochrane	100	98	96	91	97	95	94	90	90	89	86
Manitoulin	100	99	105	114	117	113	112	108	104	99	97
Nipissing	100	104	107	110	110	110	108	107	104	102	97
Parry Sound	100	103	105	108	108	105	104	101	99	98	94
Sudbury (Dist. + R.M.)	100	103	106	105	107	106	103	97	92	88	85
Timiskaming	100	98	99	100	98	93	91	87	81	78	75
NORTHWESTERN ONTARIO REGION											
Kenora	100	98	98	99	98	96	93	90	89	88	84
Rainy River	100	100	95	95	94	91	89	85	82	81	78
Thunder Bay	100	100	98	97	95	92	89	85	83	81	81
ONTARIO	100	103	105	107	107	106	105	102	100	98	96

*1976 Boundary

Social and Economic Data
Central Statistical Services
Ministry of Treasury, Economics
and Intergovernmental Affairs, 1978

APPENDIX 2

COUNTY ENROLMENT TREND, SEPARATE SCHOOL,
1966 TO 1976

COUNTY	ENROLMENT INDEX (1966 = 100)										
	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
CENTRAL ONTARIO REGION											
Brant	100	101	104	105	105	110	103	100	103	100	99
Dufferin	100	108	118	150	156	152	158	220	237	248	279
Durham (R.M.)	100	107	113	117	116	116	112	111	110	111	111
Haldimand/Norfolk	100	100	106	109	111	108	104	106	105	103	105
Haliburton	-	-	-	-	-	-	-	-	-	-	-
Halton	100	107	113	116	117	116	117	118	119	122	122
Muskoka (R.M.)	-	-	-	-	-	-	-	-	-	-	-
Niagara (R.M.)	100	103	106	109	109	109	106	110	110	108	107
Northumberland*	100	102	101	101	98	96	95	95	116	117	125
Peel (R.M.)	100	114	128	140	151	163	178	206	250	284	316
Peterborough*	100	98	99	98	97	99	97	96	93	89	82
Simcoe*	100	105	107	109	111	105	105	103	101	101	101
Victoria*	100	96	95	89	90	87	84	88	82	83	87
Waterloo (R.M.)	100	104	108	111	110	115	116	116	117	118	116
Wellington	100	105	110	114	116	116	112	113	114	111	111
Hamilton/Wentworth (R.M.)	100	104	107	110	111	113	111	110	109	109	105
Metro Toronto	100	108	110	112	119	125	130	135	139	142	139
York (R.M.)	100	98	102	105	109	117	119	124	135	160	182
SOUTHWESTERN ONTARIO REGION											
Bruce	100	100	100	105	110	118	117	119	119	116	127
Elgin	100	102	104	108	107	107	108	108	107	104	97
Essex	100	102	105	106	106	105	103	101	101	99	96
Grey	100	102	105	118	121	121	123	122	117	123	130
Huron	100	102	112	116	122	123	118	116	113	112	114
Kent	100	101	103	105	105	104	102	104	104	101	101
Lambton	100	101	102	103	100	103	100	98	98	103	108
Middlesex	100	108	111	116	117	115	113	116	118	119	116
Oxford	100	103	110	113	112	112	113	113	117	117	115
Perth	100	99	101	102	102	103	99	94	92	88	82
EASTERN ONTARIO REGION											
Dundas/Glengarry/Stormont	100	100	100	97	96	94	89	84	82	79	76
Frontenac	100	104	105	103	103	98	100	100	100	97	98
Leeds/Grenville	100	99	104	100	100	96	92	88	89	85	83
Hastings	100	106	116	119	120	120	117	117	117	116	114
Lanark	100	101	105	110	110	110	107	100	96	93	91
Lennox/Addington	100	106	121	109	106	114	121	153	169	192	184
Ottawa/Carleton	100	103	99	101	101	99	100	97	95	93	90
Prescott/Russell	100	101	101	92	91	89	86	84	81	78	77
Prince Edward	100	108	111	114	116	111	112	120	106	106	111
Renfrew	100	98	98	96	93	88	85	81	77	74	74
NORTHEASTERN ONTARIO REGION											
Algoma	100	105	109	111	109	107	103	102	99	96	95
Cochrane	100	100	94	93	92	90	86	84	82	80	77
Manitoulin	100	98	94	92	88	79	68	65	66	65	65
Nipissing	100	102	101	99	100	98	93	91	90	87	84
Parry Sound	100	82	75	79	43	36	32	18	-	-	-
Sudbury (Dist. + R.M.)	100	102	105	105	106	106	109	106	104	102	100
Timiskaming	100	101	102	96	93	89	88	85	80	78	74
NORTHWESTERN ONTARIO REGION											
Kenora	100	103	105	102	107	109	116	116	115	110	105
Rainy River	100	102	96	94	91	91	84	82	77	71	78
Thunder Bay	100	102	103	106	105	106	111	111	111	111	108
ONTARIO	100	104	105	107	108	109	109	109	110	110	109

*1976 Boundary

Social and Economic Data
Central Statistical Services
Ministry of Treasury, Economics
and Intergovernmental Affairs, 1978

APPENDIX 3

COUNTY ENROLMENT TREND, ELEMENTARY (PUBLIC PLUS SEPARATE) SCHOOL, 1966 TO 1976

COUNTY	ENROLMENT INDEX (1966 = 100)										
	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
CENTRAL ONTARIO REGION											
Brant	100	101	101	104	103	103	99	98	97	94	94
Dufferin	100	106	111	124	128	132	137	151	155	155	162
Durham (R.M.)	100	105	110	114	115	115	113	113	110	111	110
Haldimand/Norfolk	100	101	104	109	109	107	104	101	99	97	94
Haliburton	100	102	107	102	117	119	115	111	112	112	112
Halton	100	107	113	116	117	117	117	117	116	117	115
Muskoka (R.M.)	100	103	108	112	113	113	110	109	109	108	106
Niagara (R.M.)	100	102	103	104	103	102	99	98	97	95	93
Northumberland*	100	103	105	111	110	109	106	105	100	95	94
Peel (R.M.)	100	109	121	130	137	145	154	162	171	178	185
Peterborough*	100	99	100	101	100	100	98	96	96	94	91
Simcoe*	100	105	107	111	112	112	112	112	112	112	112
Victoria*	100	101	106	111	112	112	110	111	113	114	114
Waterloo (R.M.)	100	103	105	108	109	111	111	112	112	113	113
Wellington	100	104	107	111	112	111	110	110	110	109	108
Hamilton/Wentworth (R.M.)	100	101	102	103	102	101	98	95	93	91	88
Metro Toronto	100	103	105	106	108	108	109	106	104	103	99
York (R.M.)	100	105	108	111	113	114	114	115	115	116	117
SOUTHWESTERN ONTARIO REGION											
Bruce	100	101	104	107	111	116	116	117	120	121	124
Elgin	100	100	104	109	108	108	107	107	107	106	104
Essex	100	102	104	105	105	103	101	99	98	95	93
Grey	100	102	106	108	108	105	103	102	101	101	100
Huron	100	99	105	107	106	101	99	97	95	93	92
Kent	100	103	104	107	105	103	100	100	98	96	94
Lambton	100	101	103	103	100	98	94	91	90	89	89
Middlesex	100	105	107	110	110	109	107	106	104	103	100
Oxford	100	102	104	108	107	104	101	99	98	96	94
Perth	100	103	104	104	105	103	101	99	96	94	90
EASTERN ONTARIO REGION											
Dundas/Glengarry/Stormont	100	101	101	101	100	97	93	89	87	84	81
Frontenac	100	104	105	107	106	105	103	100	97	94	91
Leeds/Grenville	100	103	105	108	107	106	103	99	98	95	94
Hastings	100	102	103	108	106	104	100	97	95	93	91
Lanark	100	100	102	105	104	102	99	97	95	93	92
Lennox/Addington	100	102	109	112	117	119	123	126	125	128	126
Ottawa/Carleton	100	104	104	107	109	107	106	105	102	101	98
Prescott/Russell	100	103	104	90	90	88	86	84	82	80	79
Prince Edward	100	104	117	114	114	111	109	105	103	98	95
Renfrew	100	99	98	96	95	91	87	83	79	76	74
NORTHEASTERN ONTARIO REGION											
Algoma	100	103	106	107	105	103	100	97	94	92	90
Cochrane	100	99	95	92	93	91	89	86	85	83	80
Manitoulin	100	99	104	111	113	109	107	103	99	95	93
Nipissing	100	103	103	103	104	103	99	97	95	93	89
Parry Sound	100	103	105	108	108	104	103	101	98	98	93
Sudbury (Dist. + R.M.)	100	103	105	105	106	106	107	102	99	96	94
Timiskaming	100	99	100	98	95	92	90	86	80	78	75
NORTHWESTERN ONTARIO REGION											
Kenora	100	99	99	100	99	98	97	95	93	91	88
Rainy River	100	101	95	94	93	91	88	84	81	79	78
Thunder Bay	100	101	100	100	98	96	95	92	91	90	89
ONTARIO	100	103	105	107	107	107	106	104	103	102	100

*1976 Boundary

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APPENDIX 4

COUNTY ENROLMENT TREND, SECONDARY SCHOOL,
1966 TO 1976

COUNTY	ENROLMENT INDEX (1966 = 100)										
	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
CENTRAL ONTARIO REGION											
Brant	100	108	114	117	120	123	122	118	117	121	121
Dufferin	100	109	117	120	126	133	136	147	154	159	167
Durham (R.M.)	100	108	117	125	132	138	139	142	150	156	160
Haldimand/Norfolk	100	107	111	117	122	126	123	120	119	120	119
Haliburton	100	105	109	116	117	118	122	124	126	135	134
Halton	100	110	123	132	142	153	162	169	176	185	192
Muskoka (R.M.)	100	106	114	122	131	136	139	138	142	150	153
Niagara (R.M.)	100	107	116	121	125	127	128	128	126	126	125
Northumberland*	100	105	110	118	125	127	130	128	135	138	141
Peel (R.M.)	100	113	128	144	158	174	191	205	219	238	252
Peterborough*	100	106	112	114	117	117	116	117	112	115	117
Simcoe*	100	107	114	123	129	132	132	134	134	141	145
Victoria*	100	104	110	115	118	118	122	122	117	123	125
Waterloo (R.M.)	100	109	117	124	132	133	134	136	137	141	143
Wellington	100	108	118	126	131	135	134	134	139	145	143
Hamilton/Wentworth (R.M.)	100	105	110	113	117	118	117	116	113	114	115
Metro Toronto	100	105	111	117	122	126	128	129	130	133	135
York (R.M.)	100	109	119	129	139	145	147	152	155	162	168
SOUTHWESTERN ONTARIO REGION											
Bruce	100	107	110	115	117	121	118	116	117	123	126
Elgin	100	102	109	111	116	116	116	115	117	123	128
Essex	100	107	113	119	124	131	131	128	126	129	130
Grey	100	103	110	116	121	123	123	120	119	125	125
Huron	100	105	115	121	120	120	119	115	118	119	121
Kent	100	107	113	120	127	129	126	123	122	125	125
Lambton	100	105	113	119	123	125	125	123	122	124	122
Middlesex	100	107	114	117	127	132	136	137	140	144	145
Oxford	100	105	112	116	118	116	113	114	114	116	119
Perth	100	106	112	114	116	116	118	118	120	123	124
EASTERN ONTARIO REGION											
Dundas/Glengarry/Stormont	100	109	119	126	132	133	133	132	135	137	138
Frontenac	100	106	111	117	126	127	126	127	124	128	132
Leeds/Grenville	100	103	109	115	120	119	119	119	120	123	124
Hastings	100	104	110	115	120	124	127	126	126	127	130
Lanark	100	101	107	107	111	108	105	104	109	114	114
Lennox/Addington	100	104	109	114	121	126	126	129	135	138	139
Ottawa/Carleton	100	105	126	133	140	149	157	157	158	161	163
Prescott/Russell	100	107	127	142	153	161	164	165	161	162	166
Prince Edward	100	102	107	109	112	114	115	114	114	116	118
Renfrew	100	113	123	132	140	141	137	133	130	132	132
NORTHEASTERN ONTARIO REGION											
Algoma	100	108	118	127	135	141	144	147	145	145	147
Cochrane	100	108	149	161	169	178	181	180	177	178	182
Manitoulin	100	100	102	126	146	167	175	175	168	177	169
Nipissing	100	105	121	132	141	144	147	147	149	149	147
Parry Sound	100	107	118	123	125	132	132	131	132	134	138
Sudbury (Dist. + R.M.)	100	108	118	132	143	149	154	154	154	154	152
Timiskaming	100	105	115	128	133	130	127	126	125	126	125
NORTHWESTERN ONTARIO REGION											
Kenora	100	106	115	126	128	132	134	138	136	138	140
Rainy River	100	104	107	111	115	117	112	114	114	112	110
Thunder Bay	100	103	110	114	118	116	115	113	113	112	114
ONTARIO	100	106	115	122	128	132	134	134	135	139	141

*1976 Boundary

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Appendix 5
Adjustments Applied to the Demographic Input

A) Adjustment for Births, 1971-1976

Adjustments to Series "A" are shown in the following tables. The projections have overestimated the number of births by about 70,000. After taking into consideration the mortality rate, it is expected that the main impact of this wave of births will be felt in the elementary school system in the early and mid 1980s and in the secondary school system around the late 1980s and early 1990s.

Series "B" has incorporated the shift in fertility rates in the 1970s in the basic population projections.

B) Adjustment for the 1976 Census

This is an attempt to rectify any over or under estimate in the population projections for various parts of Ontario using the 1976 census as the basis. In general, the projection has overestimated the population growth in large metropolitan areas (e.g. Hamilton, Toronto, Ottawa-Carleton, Windsor), but underestimated those areas west and northwest of Toronto (e.g. Peel, Halton, Dufferin) as well as many of the rural areas during the 1971-1976 period. This adjustment was applied to both the Series "A" and the Series "B" projections.

APPENDIX 5 (CONTINUED)

ADJUSTMENT TO ENROLMENT RESULTING FROM
AN OVER ESTIMATE IN THE NUMBER OF BIRTHS
DURING THE 1971-1976 PERIOD, ONTARIO

ELEMENTARY

YEAR	ENROLMENT ADJUSTMENT	
	FOR PROJECTION I	FOR PROJECTIONS II AND III
1981	-72,000	-64,000
1986	-58,000	-51,000
1991	-4,000	-4,000

SECONDARY

YEAR	ENROLMENT ADJUSTMENT	
	FOR PROJECTION I	FOR PROJECTIONS II AND III
1986	-20,000	-19,000
1991	-40,000	-36,000
1996	-1,000	-1,000

NOTE: Adjustment applied to SERIES "A"
Projection only

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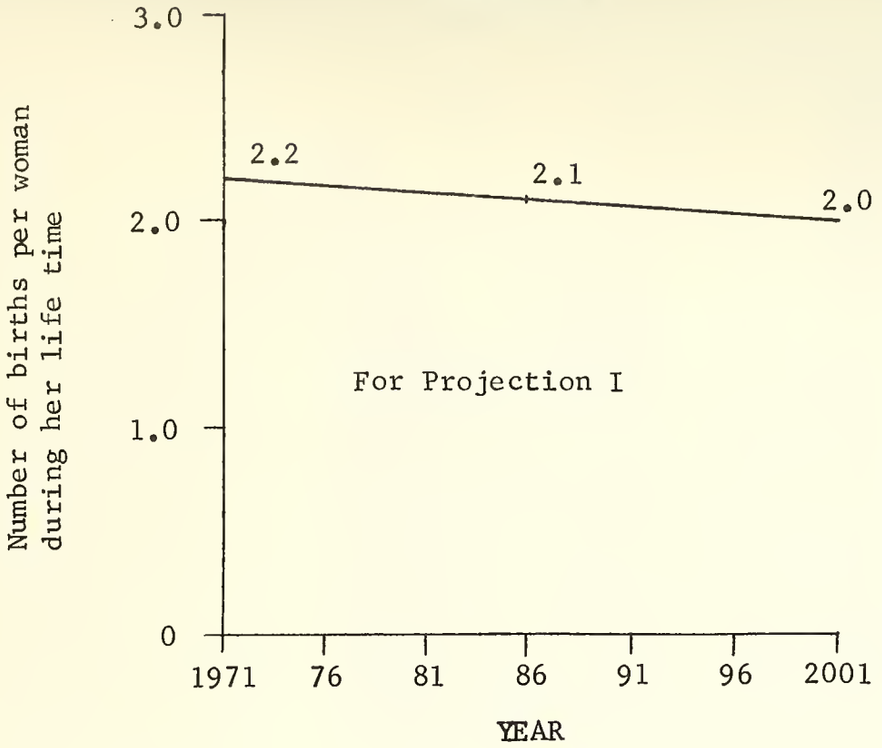
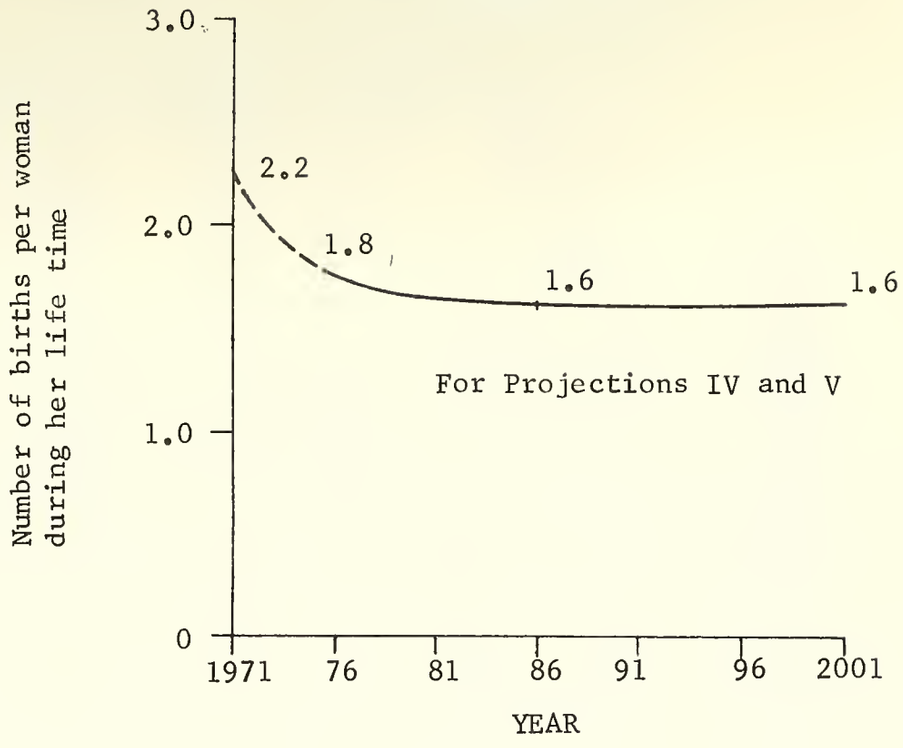
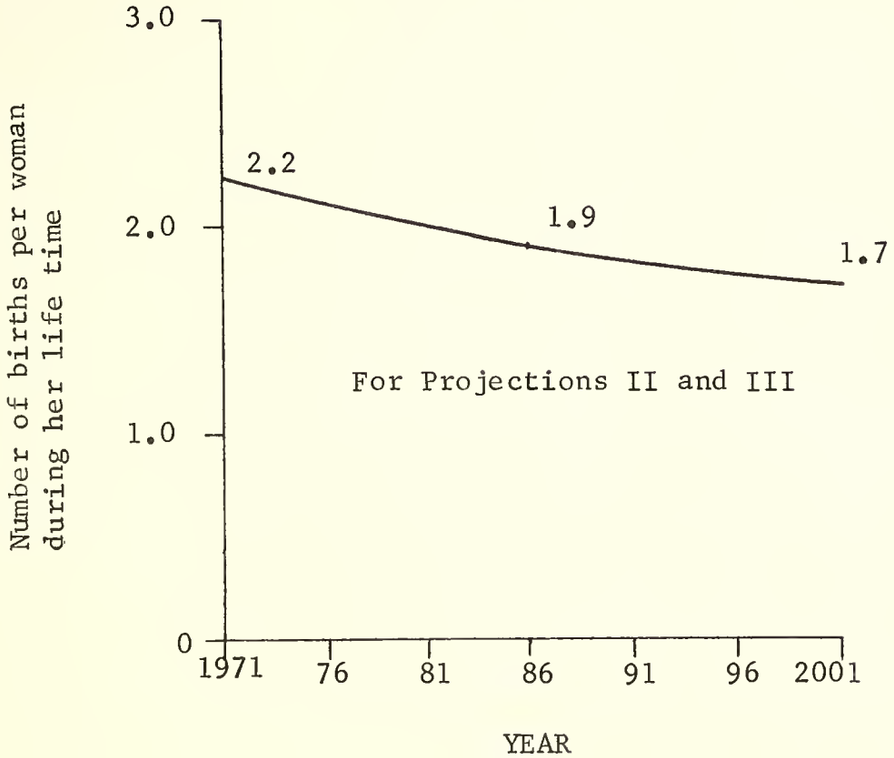
SERIES "A"



SERIES "B"





APPENDIX 6

FERTILITY ASSUMPTIONS USED IN THE POPULATION PROJECTIONS, ONTARIO

——— Projected
- - - - - - - - Actual

SOURCE: Social and Economic Data
Central Statistical Services
Ministry of Treasury, Economics
and Intergovernmental Affairs, 1978

APPENDIX 7

SUMMARY OF CHANGE IN ENROLMENT, PUPIL PLACES AND SCHOOL BUILDING CONSTRUCTION COST (AT STAGE OF TENDERING), ONTARIO, 1951 TO 1976

ITEMS	NUMBER OR DOLLARS	PERCENTAGE OF TOTAL
Change in the number of pupil places		
Elementary	+1,550,000	72%
Secondary	+592,900	28%
Total	+2,142,900	100%
School construction cost ($'000)		
Elementary	$1,741,400	52%
Secondary	$1,584,700	48%
Total	$3,326,100	100%

Compiled on the basis of data from Education Statistics, Ministry of Education.

Social and Economic Data
Central Statistical Services
Ministry of Treasury, Economics
and Intergovernmental Affairs, 1978

APPENDIX 8

SUMMARY OF SCHOOL UTILIZATION, BASED ON RATED CAPACITY
PUBLIC, SEPARATE AND SECONDARY SCHOOLS, ONTARIO, 1975-1976

TYPE OF SCHOOL	SCHOOL UTILIZATION (ENROLMENT/CAPACITY)					
	50% OR LESS	51-75%	76-90%	91-110%	111% AND OVER	TOTAL
Public						
No.	289	1,209	712	366	63	2,639
%	(11%)	(46%)	(27%)	(14%)	(2%)	(100%)
Separate						
No.	172	613	295	186	48	1,314
%	(13%)	(46%)	(23%)	(14%)	(4%)	(100%)
Secondary						
No.	15	185	248	104	15	567
%	(3%)	(33%)	(43%)	(18%)	(3%)	(100%)
All Schools						
No.	476	2,007	1,255	656	126	4,520
%	(11%)	(44%)	(28%)	(14%)	(3%)	(100%)

SOURCE: Compiled by Social and Economic Data, Central Statistical Services, Ministry of Treasury, Economics and Intergovernmental Affairs, based on synthesis of information from the Ministry of Education, Education Directories and special interviews.

NOTE: No. refers to the number of schools, % refers to the percentage of the schools in the category.

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